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## Legislative Assembly of Ontario

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## Assemblée législative de l'Ontario

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# Official Report of Debates (Hansard)

Tuesday 23 September 1997

# Journal des débats (Hansard)

Mardi 23 septembre 1997

## Select committee on Ontario Hydro nuclear affairs

Appointment of subcommittee

## Comité spécial des affaires nucléaires d'Ontario Hydro

Nomination des membres  
du sous-comité



Chair: Derwin Shea  
Clerk: Donna Bryce

Président : Derwin Shea  
Greffière : Donna Bryce



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## LEGISLATIVE ASSEMBLY OF ONTARIO

## ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

SELECT COMMITTEE ON  
ONTARIO HYDRO NUCLEAR AFFAIRSCOMITÉ SPÉCIAL DES AFFAIRES  
NUCLÉAIRES D'ONTARIO HYDRO

Tuesday 23 September 1997

Mardi 23 septembre 1997

*The committee met at 1534 in room 228.*

## APPOINTMENT OF SUBCOMMITTEE

**The Chair (Mr Derwyn Shea):** The select committee on Ontario Hydro nuclear affairs is convened. We have one item of business before us. Before I begin with that item of business, I would like to welcome Vice-Chair Monte Kwinter, from the Liberal Party. I appreciate his presence on the committee. I appreciate Sean Conway's membership on the committee. Floyd Laughren is from the New Democratic Party, and I appreciate his presence here. We have, from the government, Doug Galt, who will be acting as the parliamentary assistant for the minister in this regard, John O'Toole, Barbara Fisher and Helen Johns. I appreciate everybody here on the committee. It's a distinguished group.

Lewis Yeager is the senior research officer. He will also be joined by Anne Marzalik, who is a research officer, to attend the committee.

Of course we know Donna Bryce, who has now learned to spell my name and has discovered a new spelling for Floyd Laughren as well. That all happened just in the last hour or so, and we have now forgiven her. We've moved past that — almost.

We have one item before us. I know there has been some discussion informally by members of the committee, but this is the first meeting of the committee in its formal session, so I am in your hands. I have an item before us. Either we will or will not appoint a subcommittee, so I'm in the hands of the committee.

**Mr Doug Galt (Northumberland):** A point of order, Mr Chair: Is there not a requirement to elect the Chair?

**The Chair:** No, it was appointed by Parliament.

**Mr Galt:** That's automatic, done, finished, over with. Okay.

**The Chair:** The terms of reference took care of that. Parliament took care of that for us, but I appreciate your asking. That's why I was so presumptuous and took the chair. I assumed Parliament overrode the committee, Mr Galt.

**Mr Monte Kwinter (Wilson Heights):** Chair, may I move a motion?

**The Chair:** I have a request now for my attention from the Vice-Chairman.

**Mr Kwinter:** I move that a subcommittee on committee business be appointed to meet from time to time at the

call of the Chair, or at the request of any member thereof, to consider and report to the committee on the business of the committee, that the presence of all members of the subcommittee is necessary to constitute a meeting and that subcommittee be composed of the following members, Mr Shea as the Chair, Mr Galt, Mr Conway and Mr Laughren, and that any member may designate a substitute member on the subcommittee who is of the same recognized party.

**The Chair:** Is there any discussion on the motion?

**Mr Floyd Laughren (Nickel Belt):** Who can I designate?

**Mr Sean G. Conway (Renfrew North):** Peter North.

**The Chair:** We'll strike that one.

**Mr Galt:** I would certainly think, in terms of the Liberal Party, with Monte Kwinter being the Vice-Chair, that he would be very much in order to be on the subcommittee. I would think that would be a natural, that he would serve in that role. There's nothing wrong with Mr Conway serving there, of course, but I just see that with Mr Kwinter in the Vice-Chairman role and his putting forth the motion, it would be kind of embarrassing to nominate himself. I would like to nominate Mr Kwinter, if I may.

**The Chair:** I'm in the hands of the committee, but I trust that each caucus has had a chance to do its own internal caucus. You've asked a question of Mr Kwinter. I'll turn to him.

**Mr Kwinter:** Just for the record, I find no slight in the fact that I am not on this subcommittee. It was a decision that we made collegially. Mr Conway, who has incredible experience in Hydro affairs over the years, I think would be an admirable member and I'm wholeheartedly in support of him being on this subcommittee.

**Mr Conway:** I just exercised the Jesse Helms priority on seniority matters. I'm the Jesse of our caucus.

**Mr Galt:** So you're not accepting the nomination.

**Mr Kwinter:** No.

**The Chair:** Any other discussion on the motion before us? If not, I'll call the vote. All in favour? Opposed? Carried. Thank you so much. That was unanimously passed. I appreciate that.

Any other business before the committee today?

**Mr Laughren:** Yes. I don't know whether you want to do it now or whether you want to have the subcommittee deal with this. It's in your hands, I guess. The whole issue of staffing and expert assistance to the committee, the

scheduling and all that stuff: Do you want to leave that to the subcommittee?

**The Chair:** I was going to suggest that we allow the subcommittee to meet now, for example, and proceed through all of that activity and report to the committee as quickly as possible. I have asked the clerk to go through the agendas of everyone to see if we can ensure that we have windows of time, and she is already in the process of doing that. The subcommittee can walk through this and then, as you know, it has to bring forward a unanimous response anyhow to the committee; it'll speed up by the process of walking through it. But if all members want to be here for that, by all means feel free to stay part of it. I'd like to do that to facilitate the matters of the committee and get us moving into the substantive areas as quickly as possible.

**Mr John O'Toole (Durham East):** I just want as soon as possible to get some clarity in the intent. There's a fairly intense window of time here, and I would like to clear my own path in terms of the intent: evening meetings? I know that's a discussion yet to be held, but weekends — there's a lot of commitment of time. I'm prepared to make that, but the sooner we get a sense of how much material we need to use in preparation, what's the intent for travel, locations etc, stuff like that, the better. I have lots of commitments specifically in the riding. I'm a commuter, so if we're going to be meeting at night, I need to know that.

1540

**The Chair:** I think that's a reasonable comment. In fact, in that regard, I know the first blush indicates that Tuesday afternoons seem to be more free for more members than any other time.

**Mr Galt:** Good.

**The Chair:** Did we catch you, Mr Galt?

**Mr Galt:** Yes, I think that's great.

**The Chair:** You're happy? We'll have to speak to your party whip. Also, it raises a question about evenings or weekends. I'm perhaps less excited about going to weekends because I recognize a number of the members of the committee are from out of town.

**Mr Conway:** And there's parish work.

**The Chair:** Thank you so much, Mr Conway. I'm glad you reminded me of that. My curate doesn't happen to be in town right now; he's in Scotland. That's an extra problem for me. Thank you for reminding me. I have to get back to my mansion too; I have to see that every once in a while.

It does raise a question. Can I ask members if they have any comments they'd like to make about evening meetings, just to begin with.

**Mr Conway:** I think there's going to be a fundamental difference of opinion on that. I've got a lot of sympathy for people in and around Metro, including my friend from Bowmanville. I'm here typically four days a week, so Monday, Tuesday, Wednesday and Thursday evenings are generally all right with me. But I think it's a bit unfair to people like Kwinter and yourself and others who, because of your Metro status, have a pattern of doing riding events.

Similarly, weekends: I'm quite prepared to do the odd Saturday, if we have to, but I don't think it's reasonable to assume that we will get a lot of weekend work in.

**Mr Galt:** I was just going to see if there might be a straw vote or who might be available tomorrow morning for the committee, whatever the subcommittee decides, so we could get, as Mr O'Toole has raised, some plans in place.

**The Chair:** You're talking about the full committee?

**Mr Galt:** Yes.

**The Chair:** Because it would be my hope that the subcommittee will meet immediately following the meeting of the committee. Tomorrow morning, Mr Laughren is in committee and Ms Fisher is in committee as well. We have to see what we can do in terms of working our way through it; that may be awkward. But I will give an undertaking to try to get us together as quickly as possible to respond to the subcommittee's suggestions.

**Mr Laughren:** I want some clarification on intentions. The Legislature sits for what, another month?

**Mr Galt:** For ever.

**Mr Laughren:** No, no, I gather it is the intention to have a break after Thanksgiving.

**The Chair:** That is my understanding.

**Mr Laughren:** And that's about, what, three weeks after this week, or is it two? I'm not sure.

**The Chair:** The House leaders are still discussing it. It may be two weeks or thereabouts. I think there's still some discussion with the House leaders.

**Mr Laughren:** The reason I raise that is, is it our intention to sit as a committee between now and then, or were people thinking we would condense it all into the break, the three or four weeks before we come back for the throne speech in November?

**The Chair:** Can I suggest that given the scope — I know the detail into which many members would like to go in the areas of economics and a whole range of things — anything we can do at this end, right now, will allow us to take more time in greater depth, even during the break. That would be my suggestion to the committee; it can do with it as it will.

But picking up a point about Tuesdays, for example, since Tuesday afternoons are available, and being responsive to Mr Conway's sensitivities to other members of the committee, I'm wondering if there may be an opportunity in terms of Tuesday afternoons and evenings as one option. I put that only as a thought to members right now to think about. Subcommittee can wrestle with that and the committee can still deal with it. That may be one option, instead of messing up everything else. I'll leave it in your hands. I know that everybody has got commitments in terms of classes and any number of other things, but I'll leave that in your hands and we can deal with that momentarily.

Anything else for the committee to deal with at this point?

**Mr O'Toole:** Just on a broader nature, the timetable, as I understood it initially, was some early report in October, and the other reporting point was early in December.



**The Chair:** Yes.

**Mr O'Toole:** Has there been any flexibility or discussion on that?

**The Chair:** Yes. You will recall that yesterday in the House, a motion by Mr Wildman removed the October 3 requirement for an interim report. Indeed, I had already indicated that the interim report was that we hoped to be meeting. I think that made the point very clearly. I think we all recognized the difficulty of hitting that deadline.

December 1 still stands before us, unless for some reason as we go through this, there is a reason for any exten-

sion, but that is the path we'll focus upon. That's what Parliament has told us to address ourselves towards, so we'll stay with that, unless we have some other reason to change our minds as a committee as we move through this process.

Any other issues to raise? If not, I will declare us adjourned. If subcommittee would be good enough to stay behind, we'll work our way through a list and we will report out to the committee as quickly as we can possibly get it back together again.

*The committee adjourned at 1546.*



## **CONTENTS**

Tuesday 23 September 1997

Appointment of subcommittee .....H-1

### **SELECT COMMITTEE ON ONTARIO HYDRO NUCLEAR AFFAIRS**

#### **Chair / Président**

Mr Derwyn Shea (High Park-Swansea PC)

#### **Vice-Chair / Vice-Président**

Mr Monte Kwinter (Wilson Heights L)

Mr Sean Conway (Renfrew North / -Nord L)

Mr Doug Galt (Northumberland PC)

Mrs Barbara Fisher (Bruce PC)

Mrs Helen Johns (Huron PC)

Mr Monte Kwinter (Wilson Heights L)

Mr Floyd Laughren (Nickel Belt ND)

Mr John R. O'Toole (Durham East / -Est PC)

Mr Derwyn Shea (High Park-Swansea PC)

#### **Clerk / Greffière**

Ms Donna Bryce

#### **Staff / Personnel**

Mr Lewis Yeager, research officer, Legislative Research Service



H-2

H-2

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## LEGISLATIVE ASSEMBLY OF ONTARIO

SELECT COMMITTEE ON  
ONTARIO HYDRO NUCLEAR AFFAIRS

Tuesday 30 September 1997

*The committee met at 1540 in committee room 228.*

## SUBCOMMITTEE REPORT

**The Chair (Mr Derwyn Shea):** Welcome to the second meeting of the select committee on Ontario Hydro nuclear affairs.

I will note that Mr Conway has indicated an emergency in his riding and is unable to be with us but will be joining us as soon as he can.

In the meantime, as the committee knows, we are meeting this afternoon and this evening, at least that is the recommendation of the subcommittee. We need a mover first of all for the subcommittee report, if somebody would care to move it. Thank you, Dr Galt. Now we'll have discussion on the subcommittee report. You have that before you.

**Mr Doug Galt (Northumberland):** In connection with hiring, if we need to discuss in any kind of detail, I think we should go in camera rather than discussing individuals in open session. That would only be fair to them. However, if everybody's comfortable with the recommendations, then we can just go ahead.

**The Chair:** All right, I'll take that as a notice that you would move a motion if there's going to be any discussion on that. Otherwise, we'll carry on and see what the other caucuses have to say as we proceed through that.

The other items obviously are not contentious enough to require withdrawal.

**Mr Monte Kwinter (Wilson Heights):** The only caution I would make is that the recommendation of the subcommittee be conditional on us entering into satisfactory negotiations with the individuals involved and adhering to government guidelines and industry practices.

**The Chair:** I assume that you would be content to leave that matter to the subcommittee.

**Mr Kwinter:** Yes, I would.

**The Chair:** We'll make that in the form of a motion.

**Mr Kwinter:** I move it.

**The Chair:** That's actually part of our report. That's detailed, but you've said it again for the record. Any other comments?

There are recommendations. Let me just walk you through them to make sure there is no misunderstanding. We'll walk it through. You'll see the subcommittee has brought forward for the committee its recommendations that we proceed in an orderly fashion.

## ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

COMITÉ SPÉCIAL DES AFFAIRES  
NUCLÉAIRES D'ONTARIO HYDRO

Mardi 30 septembre 1997

Item 1 deals with the four phases that are recommended.

Item 2 deals with the issue of staffing for the committee. You'll see the recommendations. There is the potential for a motion that Mr Galt has put before us to keep in mind in case we want to deal with that in any other detail. Otherwise, that's before us.

Item 3 is simply the pro forma recommendation that the committee will meet at the call of the Chair. But the subcommittee has placed before you a recommendation so that we can at least get our calendars in some kind of logical order for the next several weeks. Seeing what the House leaders are doing these days, that may be a faint hope, but we'll continue to press on the side of the select committee.

You will see the dates of the week of September 29 and the agenda that the subcommittee thinks would be appropriate for us to follow to make sure we're moving through in the right kind of order, one week building upon the next so that as we get to issues like site visits and public deputations we will have had a chance to be well briefed. The technical briefings begin today with ministry staff and then Ontario Hydro coming up next week.

It would be our hope that the committee staff, if they are approved by the committee, would be available for the briefing sessions so as to be up to speed as well. The week of October 6, you'll see we begin to bring in the witnesses at that point from Ontario Hydro, then moving into the Atomic Energy Control Board and so forth. Then we move into another schedule for the weeks of October 20, 27 and November 3.

You will note Mondays from 2 pm until 6 pm, 7 pm till 9 — that would give at least one evening where deputants who may not be available in the daytime will be able to access the committee in the evening — and Tuesdays, Wednesdays and Thursdays 9 until 5.

The week of November 10 is constituency week and it is recommended by the subcommittee that the committee not meet.

At that point we should know very clearly if we're in a position to be writing our report or if we need any additional time. That's something the committee will be seized of to deal with. I think that by the time we're there we'll know how we're proceeding.

You will see also the subcommittee's recommendations.

Item 4: We will try to use videoconferencing wherever possible, particularly for offshore deputants and witnesses.

Item 5 indicates very clearly the view that there will be at least three site visits. It's obvious which nuclear sites they would be.

It is the Chair's intention to continue to keep as close as we possibly can to the December 1 deadline. We're aware that the October 3 deadline was dropped by the Parliament, by motion. That is not one that will occupy our attention any longer. But we do have a deadline to complete as much as possible.

Behind all of this is the understanding that a number of questions and issues have been raised in a number of other forums, certainly since the late 1980s and on.

We have already asked legislative research to begin to assemble documents. Some documentation's been brought before us already in the form of this document that you have on your desk to this point. There will be other documents we hope to table with you very shortly as well so that we as we go through our orientation briefings we can all have a chance to come up to speed on some of the issues that deal with the question of where we go from here. The essential issues we wrestle with to start with are: What went wrong, if anything? What is being done, if anything, to respond to that? Then there are the future issues we will deal with. Behind that there are a number of other questions that will be raised.

The subcommittee recommended that the minister be asked to attend the committee at a little later date so that we may have a more complete examination of issues he may like to lay before us. In the light of what may be some other studies that may or may not be released, the committee at that point will at least be in a position to ask appropriate questions and to give focus appropriately to issues that will be germane to the third part of this committee study.

With that behind us, we have the recommendations of your subcommittee. To begin with, I would be prepared to receive a motion to approve and then enter into discussions for that. Any discussion as a result of the report?

**Mr Galt:** There's just one slight modification in the discussion, as I remember, related to Ontario Hydro completing on the Monday. We weren't going to drag them over into the Tuesday, only that, if necessary, Carl Andognini would come from Tuesday into Wednesday. I think Monday is plenty for Ontario Hydro to tell us the problems without giving them any more than 2½ hours.

**The Chair:** Mr Kwinter, do you agree with that correction?

**Mr Kwinter:** Yes, I have no problem with that.

**The Chair:** We'll make that correction to the agenda as well. Any other discussion arising out of the subcommittee's report?

**Mr Kwinter:** It seemed to me in our discussion at the subcommittee that we certainly explored the possibility or the desirability of visiting a coal-fired station. I notice that is not in our list of site visits. We had discussed possibly Nanticoke or Lakeview or somewhere.

**The Chair:** As you may recall, we did discuss that. We discussed three potential sites. I'm reminded that we did not come to an agreement on any one site, but we did discuss that as a possibility. We thought that as we moved through this next week or so we might be in a better position to focus on one of those fossil fuel sites to visit. But if it would please you to add in that the committee should at a later date give consideration to a visit to a fossil —

**Mr Kwinter:** I would suggest that we not designate which site, but just that we visit a fossil fuel site.

**The Chair:** That we may give consideration to a fossil fuel site. Is there agreement to add that in? We'll consider that as we move through the process. Any other corrections or discussion on the subcommittee's report?

Are you ready to vote? All in favour? Opposed? Carried.

That means we have approved the consultants for the committee. I will ask that the consultants be sent up. They are in the building, just on the chance that they might be approved. They were advised that they should hold their breath because this committee had the right to decide what it would do. But they were here, standing by, so that they could come up to speed as quickly as possible. I'll make sure they're brought in and they're ready for the briefings.

We had agreed we would start the technical briefings immediately following the approval of the subcommittee's report. We have done that, so the briefing is now going to be held by the Ministry of Environment and Energy, electricity operations and planning section. I will ask the staff if they will come forward and take the witness stand. There are Deborah Farr, John Savage and Cynthia Brandon. Those are the three names I have right now that are on your agenda.

1550

**Mrs Barbara Fisher (Bruce):** Just as a point of clarification, Mr Chair: I was wondering whether or not all of the select committee procedures from here on in are public, and if they are, how has anybody been advised of that?

**The Chair:** My understanding is that they're always open to the public if they want to attend a subcommittee meeting. Some members of this committee have attended a subcommittee meeting. It's open — were you speaking about the full committee?

**Mrs Fisher:** We're now in a session where we're going to be presented with information to a select committee. I want to know if in fact this is now a public forum, and if it is, does anybody know that we're even doing this today and that the briefing is on? I'm just asking. It's not in the subcommittee report.

**The Chair:** The answer is yes, but I'll let the clerk answer.

**Clerk of the Committee (Ms Donna Bryce):** The committee notice went out last Thursday that the meetings were on this week. That's normal procedure for standing and select committees, and all standing and select committees are in open session unless the committee moves a motion to go into closed session. Today being the first



meeting, approving that subcommittee report is critical to getting the information out. Subcommittee reports are always confidential until approved by the full committee but because in this select committee the Chair has the authority to call meetings, Derwyn went ahead and set up this week's meetings. This subcommittee report is now a public document.

**Mrs Fisher:** I'm not being critical of the process to date. The reason I'm asking is that I've had people approach me and ask me at what stage in the game would the select committee's procedures become public, open, all the time, for whomever wishes to sit and listen. Is that as of now? That's what I'm asking.

**The Chair:** Yes.

**Mrs Fisher:** Just to finish that off then, how will anybody know that? Does the agenda of this committee get posted somewhere? How will anybody know?

**Clerk of the Committee:** Notice is sent out the week prior to the meetings. The press gallery gets copies of that. Notice is sent out to the various people within the assembly. There is a notice in the subcommittee about advertising for public hearings; that will go out. Notice will be placed on the Ont.Parl channel to advise the public that the committee is meeting. Those are all the normal channels, unless you want something special?

**Mrs Fisher:** It's a little bit different, I think, in that people won't even know today, for example, that next week, as just adopted by the subcommittee report, there will be certain people attending as intervenors or presenters. I just think that should be public knowledge. I don't know how you put it out. This is truly an honest question. I don't know. I'm telling you that I think that it should be out. I think that somehow it's not necessarily typical of another standing committee.

**The Chair:** The clerk is suggesting that the committee may wish to do a press release as well, in addition to everything else that's being done, if that would be of help to you?

**Mrs Fisher:** I think it would be of help to the public. I think that there's a keen interest in knowing what's happening here and I know that our effort is trying to make sure that everybody is advised. I just didn't see in the report how we were going to handle that side of it. I'm just asking because I didn't know.

**The Chair:** I think the clerk's response has given you a fairly clear indication of the procedure which is followed by all committees, and the broad range of responses to it. We'll also then do a press release to make sure that people are aware of it. We have no control over whether that's picked up or not, but at least local media can take advantage of it.

**Mrs Fisher:** That's great.

**The Chair:** Is there an agreement on that by all caucuses? Mr Laughren is nodding his head. "Yes," says Mr Kwinter. All caucuses are agreed to that, so that's fine. We'll carry on in that regard.

**Mrs Helen Johns (Huron):** I'd like to suggest that we move our two legislative people to a desk so they might be able to take some notes here. They're sitting at chairs

there and it might be best if we move them somewhere where they would have adequate space to write.

**The Chair:** If they have come in now; I'm not sure. If they are, then by all means they ought to have a spot to work on the legislative desk. You're quite right. They might just introduce themselves as they come down.

**Mr Richard Campbell:** My name is Richard Campbell and I'm with the firm of GPC, Government Policy Consultants, here in Toronto.

**Mr Robert Power:** My name is Robert Power. I'm with the law firm of Outerbridge, Miller, Sefton, Willms and Shier, here in Toronto as well.

**The Chair:** I would think at some point there may be discussions with you as well, but for now, if you'd like to take your seats, you can make the appropriate notes necessary. I'm pleased you're able to attend and be with us from the very beginning of the committee's deliberations and its orientations. If there are issues of some concern, members obviously will want to consult with you. I'll keep an eye open to keep your attention and make sure we're all on the same wavelength.

#### MINISTRY OF ENVIRONMENT AND ENERGY

**The Chair:** Let me turn our attention to the technical briefing. That is being conducted by, as I mentioned, the Ministry of Environment and Energy.

**Ms Deborah Farr:** Thank you, Mr Chairman. My name is Deborah Farr and I'm the manager of electricity operations and planning within the policy division of the Ministry of Environment and Energy. I have with me two colleagues. Cynthia Brandon is counsel with our legal services branch. John Savage is an adviser of utility operations with the electricity operations and planning section.

**The Chair:** Thank you. Are there any other staff from the ministry at all that you may want to call on?

**Ms Farr:** No. At this point there will just be the three of us.

**The Chair:** Thank you very much. We are in your hands.

**Ms Farr:** Thank you, Mr Chairman. What we're here to do today is provide a technical briefing on the electricity system. We'd like to cover some materials with you; specifically, an overview of Ontario Hydro and the Power Corporation Act, which is the act against which Ontario Hydro receives its mandate. We'd also like to speak about the —

**Mr Kwinter:** On a point of order, Mr Chair: Are they going to be providing us with any written material?

**Ms Farr:** No.

**Mr Kwinter:** Okay. That's fine. I just wanted to know.

**The Chair:** Although that does raise a good point. It may be that upon reflection it would be helpful if anything can be distilled. But we'll have the minutes, frankly, of Hansard. If there's anything that could enhance your presentation, obviously you might reflect upon that, and if there is, feel free to table that with the committee.



**Ms Farr:** One thing I would like to point out is that I believe that background binders have been provided to the members. A fair amount of the material that we will cover here today is covered in that binder. Certainly, it can be supplemented with other things that we might speak to here today.

**The Chair:** All members have this documentation here right now. I know they have all read it, so they are ready now to proceed with questioning in detail from that. Thank you. If you think that as a result of your presentation there's anything further that might be tabled, do so. We will have Hansard to guide us as well.

**Ms Farr:** Perhaps I can just go over what we're going to cover. I mentioned the overview of Ontario Hydro and the Power Corporation Act. We'd also like to speak to the Ontario Energy Board Act and the Ontario Energy Board and its relation to the rate reviews of Ontario Hydro's rate submissions. We'll also speak to the Atomic Energy Control Board because it has specific responsibility for the nuclear facilities Ontario Hydro operates. Then we will also speak to the municipal electric utilities, the distribution sector of the electricity system.

**The Chair:** Ms Farr, to facilitate matters for the committee, may I ask that as you go through each section, pause, let me ask members of the committee if they have questions on that section, then we'll move to the next section.

1600

**Ms Farr:** That's fine. I'd like to start with just a brief summary of the Power Corporation Act. Ontario Hydro operates under the Power Corporation Act. It gives Hydro the statutory responsibility to generate, transmit, distribute and supply electricity throughout Ontario, as well as to provide energy-related services and energy efficiency programs. The PCA is the vehicle that establishes Ontario Hydro as a self-regulating monopoly and as a financially self-sustaining corporation without share capital. It gives the corporation the ability to set its own rates and to raise capital by issuing bonds and notes which are guaranteed by the province of Ontario.

The Minister of Environment and Energy provides policy direction through the administration of the Power Corporation Act and through the appointment of the members to Ontario Hydro's board of directors. Also, the Deputy Minister of Environment and Energy is a non-voting member of Ontario Hydro's board of directors and represents the Ontario government on behalf of the minister. The deputy's responsibility is to represent government's interests in Hydro's decision-making and to ensure that Hydro's activities are consistent with government policy.

With respect to the act, Ontario Hydro was created in 1906 as a publicly owned commission to provide electricity at cost to all people of Ontario and to assist with the economic development of the province. It has special statutory powers, including expropriation powers, and it has a tax-exempt status. As we mentioned earlier, it does have the power to set its own rates, but that is subject to review by the Ontario Energy Board. Ontario Hydro

also approves the rates of municipal utilities and private utilities to which it sells electricity. It approves the municipal utilities' capital expenditures, borrowing and other related matters. The act also makes Hydro responsible for regulating and inspecting the safety of electrical equipment in Ontario and enables it to restrict access of other generators to its transmission system.

To counterbalance these particular powers that Ontario Hydro has, the PCA also provides mechanisms which are designed to protect the public interest. The government appoints the chair, the chief executive officer and the board of directors. The deputy minister sits, as I mentioned earlier, as a non-voting member, and there are other governance controls, including the power to issue policy directives under the PCA. There's also requirement for order-in-council approvals for all significant operational contracts as well as the construction of new facilities for electricity purchases and power exports and for borrowing and issuing of securities.

Maybe I can just go through fairly quickly the list of the areas where order-in-council or LGIC approval is required. It's appointing, removing for cause and determining the remuneration and expenses payable to the chair and the directors, except the president; appointing either the chair or the president as the CEO of the corporation — currently the president is the CEO, but as we know, Mr Farlinger is in fact acting as chair, president and CEO at this time, pending the appointment of a new president. They appoint the auditors to audit the accounts of Ontario Hydro. LGIC approval is also required for borrowing money for the purposes of Ontario Hydro. LGIC approval is required for advancing money appropriated by the Legislature for the purposes of Ontario Hydro; guaranteeing the securities issued by Ontario Hydro; authorizing Hydro's participation in economic development programs; and authorizing the minister to issue binding policy directives.

Certain specific powers and authorities are granted to Ontario Hydro under the PCA which may also be exercised only with the prior approval of the LGIC. Specifically, they are acquiring by appropriation or otherwise constructing and using real and personal property for the use and supply of electrical power; borrowing money and issuing securities; entering into contracts for the supply of electrical power to a municipal corporation; making regulations for generation, transmission, transportation and distribution; selling, supplying and delivering heat energy; acquiring, constructing and operating equipment, facilities and works for the production, supply and delivery of heat energy; engaging in specific activities for the purpose of facilitating use and sale of heat energy. Carrying on related business ventures also requires LGIC approval, as does prescribing by regulation the Ontario electrical safety code.

Understanding now that that is the Power Corporation Act, do you have any questions on that?

**The Chair:** We'll pause here for a moment. Let me just ask members a question in terms of procedure so it's established at the beginning. Do you wish to proceed by

caucus or by speakers' list? Is anybody particularly fussed one way or the other? Then let me do it on the speakers' list; that will make it easy.

**Mr Kwinter:** Ms Farr, I was interested in your explanation of the various responsibilities under the Power Corporation Act. The one I'm particularly interested in is the deputy minister's role at Hydro. The Power Corporation Act provides that the deputy's responsibility is to represent government's interest in Hydro's decision-making and to ensure that Hydro's activities are consistent with government policies. That is what you said if I'm not mistaken?

**Ms Farr:** Yes, sir.

**Mr Kwinter:** The problem I have — this isn't a criticism, but it seems to me that if that is a statutory requirement, the government has the authority to set the policies of Hydro, and that is why the deputy is there. We are in a situation where there is a white paper that is supposed to come down with the government's view of what the policies of Hydro should be. It would seem to me that it would be imperative that we as a committee have that white paper so that in our discussions we at least know — if the act gives the deputy the power to convey the government's policy to Hydro and Hydro is bound to adhere to that policy, then we should at least know in what context we are discussing what we are discussing. That is going to be signalled in this white paper. It was my understanding that that white paper could have been available October 1, which is in another day or so. Do you have any idea of when that paper will be forthcoming?

**Ms Farr:** I'm sorry, but I do not. That is a policy question that I think would be best directed at the minister, in terms of when that paper might be available.

**Mr Kwinter:** Do you understand where I'm coming from?

**Ms Farr:** I do understand. I would like to clarify one item, and that is that the deputy minister is a non-voting member of the Hydro board of directors. The intention is that they, as you indicate, convey the government policies and priorities with respect to electricity. The Hydro board of directors is appointed through LGIC, and it is their responsibility to conduct themselves and to deal with the day-to-day operations of the utility.

**Mr Kwinter:** But the point is that they serve at the pleasure of the crown. As a result, they get replaced if they don't follow government policy. They're not an independent board that can make any policy. They're independent within a certain framework, within the policy guidelines. But those policy guidelines are determined by the government. Because they are government appointees, anyone who takes issue with government policies would be replaced.

The point I'm making is that in any of our discussions — we're trying to resolve some of the problems at Hydro, and it's going to be very difficult if we don't know the direction that is going to be given to this board. The white paper is a discussion paper, but eventually it will signal the direction that the government sees Hydro going in.

**The Chair:** I think Ms Farr responded by suggesting — you've made a point very clearly. It may be a point best directed to the minister, and it may also be directed to the parliamentary assistant. You may wish to get that on the record later in the response. Let me carry on in rotation, unless you want to respond precisely to that point, Mr Galt. Mrs Johns?

1610

**Mrs Johns:** It's my understanding that under the Power Corporation Act, Ontario Hydro is obligated to provide power to the province. I'm interested in the proposal Ontario Hydro has put forward and what kind of repercussions that has. I guess that's one of the objectives we have on this committee. I was wondering if there was any past history that you could let us know about that would inform us about times when there would have been a shortage of power and what Ontario Hydro had to do in those circumstances to be able to provide that power. Has there ever been a time in the history of Hydro where they have not been able to fulfil that mandate they had to provide power to all the province?

**Ms Farr:** To my knowledge, Ontario Hydro is responsible and has carried out its responsibility to meet the electricity needs of all Ontarians. Now, there are on a day-by-day basis incidents that might occur that might require them to take what I would call extra steps in order to meet those demands. For example, they might at a given moment be required to purchase additional electricity purchases from the neighbouring utilities in the States to meet the demand of a particular day or a particular week, or they might have to bring on generation that doesn't typically operate very often to meet the demand that has been a result of some particular situation. But to my knowledge, and of course this could be verified by Ontario Hydro, I am unaware of them being unable for any length of time to meet their statutory requirement.

**Mr Floyd Laughren (Nickel Belt):** Good afternoon, Ms Farr. I was disappointed in your answer on the white paper, but I won't pursue it at this point. I agree with my friend from Wilson Heights that that is critical to this committee.

What I wanted to ask you about was that you implied in your comment about the setting of rates that Ontario Hydro sets the rates subject to the approval of the Ontario Energy Board, which makes it sound as though the Ontario Energy Board has the final say in setting rates.

**Ms Farr:** I hope I said subject to review by the Ontario Energy Board. If I said "approval," I apologize.

**Mr Laughren:** Either way, it makes it sound as though that's where the process ends. That's not the case, is it?

**Ms Farr:** No. I have some materials here to share with you a little bit later about the Ontario Energy Board process, but the quick answer to your question is that yes, the rates are submitted by Ontario Hydro, reviewed by the Ontario Energy Board and they do make recommendations with respect to that rate submission; however, it is the responsibility of the Ontario Hydro board of directors to make the final decision with respect to the rates for the following year.



**Mr Laughren:** Not the cabinet?

**Ms Farr:** No.

**Mr Galt:** Thank you very much, Mr Chair. I'm absolutely intrigued by the lack of ability presently of the Ontario government — and this isn't just in the last year or so; this is traditional — to have any significant control over the monopoly. First, I'm curious: Is that board currently filled, and what is the number on the board?

**Ms Farr:** The Power Corporation Act allows for a total of 22 members to the Ontario Hydro board of directors. There are currently 15 members. In response to your comment about the lack of control, the Power Corporation Act has provided Ontario Hydro with specific responsibilities, with specific powers, but does counterbalance those by virtue of the fact that they do appoint the members of the board of directors and it is their responsibility to make the decisions on the day-to-day operation of the utility.

**Mr Galt:** The comment was made earlier that if those members of the board didn't behave according to government policy, they could be dropped from the board. Is that true, that it's quite easy to end their term partway through?

**Ms Farr:** They do have a three-year term. I believe they can be let go with cause, but perhaps our legal counsel can answer that question.

**Ms Cynthia Brandon:** That's exactly right. In order for a board member to be removed from their position, there must be cause. A board member of course is responsible to the corporation, to Ontario Hydro, so cause would probably have to be not acting in the interests of Ontario Hydro, not necessarily not pursuing a policy that the government at that time has decided they'd like Ontario Hydro to pursue, unless the government has issued a policy directive under I believe section 11 of the act. Once a policy directive has been issued, the board members are relieved of that fiduciary duty they owe to the corporation in terms of their liability, so they can then follow the policy of the directive even if it may not be in the best interests of the corporation at that point in time.

The shorter answer to your question is that you're right; there has to be cause to remove a board member.

**Mr Galt:** I hope I'm not dragging this out too long. Help me with "cause." Could you give me two examples, a ridiculous extreme and one that would be kind of borderline? Is that a fair question? I'm trying to get a handle on this. As I've been trying to work with this the last two weeks, it bothers me, the lack of what the Ontario government can do or not do, yet we get saddled with the debt. I know we have little control there. The public thinks we have all kinds of control over Ontario Hydro, rates and everything, but obviously it's not the way the public thinks.

**Ms Brandon:** I'd like to clarify that I am not a labour lawyer, so I'm not going to do astoundingly well on this. However, I can cite you the instance, for example, of where the government had made a decision that the number of board members would be reduced and some board members were given notice that their appointments

were going to be terminated. That went to court and in fact the board members were reinstated because there simply was no cause for dismissal.

If they've engaged in any kind of illegal activity, that would obviously be cause. If they were acting in a way that was not in the best interests of the corporation, I think that would be the best broad example of there being cause.

**Mr Galt:** Do they have to take a sledgehammer and go out and start beating on one of the generators to get laid off? I'm being silly, but I'm trying to sort out what a cause would be.

**Ms Brandon:** I would think that if that happened, there might be cause there, yes. If they're acting with a conflict of interest —

**Mr Galt:** Maybe I'm pushing too hard, but I was trying to get an understanding.

**Ms Brandon:** Other than the very broad terms — I'd be happy to send you some further examples once I've really looked at the issue of what would be cause. I can tell you what would not be cause. Cause would not be, short of a policy directive, simply not adopting the government policy.

**The Chair:** Your response to Mr Galt would indicate that the responsibilities are the same as any other corporate director —

**Ms Brandon:** That's exactly my point, and they owe their duty to Ontario Hydro.

**The Chair:** — in any corporation, which would involve particularly issues of due diligence.

**Ms Brandon:** Yes.

**The Chair:** It's a question then of whether due diligence is being pursued. In that instance, there may be some legal enjoinment there, but that's the only area.

**Ms Brandon:** Yes.

**The Chair:** Is the board recompensed? Are there honoraria paid to the board members?

**Ms Farr:** Yes, there are.

**The Chair:** Would you just elaborate.

**Ms Farr:** I believe it's \$5,000 per annum paid to the board members, and there is also a per diem of \$185 for their attendance at meetings.

**Mrs Fisher:** I have a couple of questions around the board issues. What constitutes a quorum? Half of those who show or half or more of the board?

**Ms Farr:** That is a question that I don't know the answer to, I'm afraid.

**Mrs Fisher:** Good start.

**Ms Farr:** I apologize. I will find out for you.

**Mrs Fisher:** Second, given that Ontario Hydro is a public corporation, although managed by a board of directors at arm's length from government, are the board meetings public, and if not, why not?

1620

**Ms Farr:** The board meetings are not public. They are for the board members only and their invited guests, for example, if they have someone in to provide a presentation. Their responsibilities are to consider the advice and guidance of senior management, which they may or may not accept, as advice and guidance to the board of



directors. It is not a public forum to provide that advice and guidance.

**Mrs Fisher:** Would you know in your life of knowledge of Ontario Hydro if there had been any consideration of whether those boards should be public, given that it's a public company? In addition to that, although it is an incorporated body, it is different from a private corporation, also somewhat in terms of what maybe should be deemed the openness or the non-openness of the board proceedings because it is a public company. Would you know if there's ever been a serious discussion since the last major rewrite of the Power Corporation Act, which was what year?

**Ms Farr:** There was a minor one in 1994, I believe. Then there was one in 1989, changes to the Power Corporation Act in 1989.

**Mrs Fisher:** Would you know if there has been any discussion with regard to whether the board meetings should be public or not?

**Ms Farr:** I'm unaware of any discussions in that regard. The corporation does act as a business entity; they do look at business decisions. The senior management provides advice and guidance which may or may not be accepted by the board.

**Mrs Fisher:** Would you know, compared to other public corporations, whether their board meetings are open or closed?

**Ms Farr:** I'm unable to provide you any advice on that.

**Mrs Fisher:** The one other question I have is this: As it relates to the board and how they process their decision-making, the terms and conditions of why this select committee is struck revolve around the IIPA report and how that came to be, the economics of it and the feasibility of the recovery plan in it, as well as AEBC's response to whether that will meet the safety requirements under the regulatory part of the operation of nuclear sites.

I have a question that's very direct. I don't know if this is where I should ask it, but I'll start with this audience. If it's not the right body, then we'll keep asking it till one that's there is the right answer. How long in advance of that board meeting — I don't know; it was around August 13 — would all of those board members have had all of that executive input and the management decision recommendations? How long in advance of that were they given that information so that when they went to board that day they could make that decision of such magnitude?

**Ms Farr:** I suggest you may want to clarify some of this information with Ontario Hydro. The board operates in subcommittees, so certain board members may have seen things in advance of others, or it may be a subject of a couple of subcommittee meetings in advance of it going to the full board. In terms of the binder of materials that is provided to board members — our understanding of it — it is roughly about one week in advance of the board meeting that the board members are provided with the full board package.

**Mrs Fisher:** Okay, thanks very much.

**Ms Farr:** If I could respond to a question you asked earlier, and my colleague Cynthia Brandon helped with that, the quorum for the Ontario Hydro board of directors is a majority of directors being present at the time.

**Mrs Fisher:** Present, a majority of the directors.

**Ms Farr:** A majority of the directors.

**Mrs Fisher:** So 12 or more.

**Ms Farr:** If there are 15, there would be —

**The Chair:** You've got 15 on the board, so eight will be a quorum.

**Mrs Fisher:** That's exactly the question I'm getting at, though. Is it of the total board potential or of the sitting members or of the present members?

**Ms Brandon:** It's a majority of the directors for the time being that constitutes a quorum. I would take that to mean a majority of the directors who are actually appointed at any given time.

**Mr John O'Toole (Durham East):** Just a housekeeping type of issue: There's a fair amount of time being spent on the board and understanding its function. Having served on a number of boards — not of course of this magnitude — there's attendance and then there's passive attendance. How many board meetings would they have in any particular year? Is there a regular schedule of board meetings?

**Ms Farr:** Typically, they have a board meeting each and every month. I believe they have a requirement for nine board meetings. I'd like to verify that for sure, but that's my understanding.

**Mr O'Toole:** That's within their constitution or bylaws. Is there a constitution or a set of bylaws governing the activities of the board?

**Ms Farr:** Certainly Ontario Hydro does have —

**Mr O'Toole:** Lots of policies.

**Ms Farr:** — lots of policies, conflict-of-interest guidelines etc. I suggest if you want more information on the specific machinations of the Ontario Hydro board of directors, you might want to speak to them directly.

**The Chair:** Just to remind the committee, next week we begin in depth with the briefings for Ontario Hydro. These questions will be particularly germane then.

**Mr Laughren:** Ms Brandon, you were quite delicate in your response to Mr Galt. I thought you were going to say that the difference between cause and not just cause was that if you tried to dump board members in the middle of their term because they were not Tories, that was not cause, and indeed that's what the court decided, isn't it?

**Ms Brandon:** I don't recall the references to that.

**The Chair:** That was comic relief. I appreciate that.

**Mr Laughren:** No, deadly serious.

**Mr Kwinter:** I just wanted to comment on a couple of statements that were made: one about the appointments and the cause. I wasn't talking about cause, but what happens is that traditionally — and I assume but I don't know whether it's mandated — these appointments are three-year appointments.

**Ms Farr:** Yes.

**Mr Kwinter:** At the end of three years, they automatically lapse unless they're renewed.

**Ms Farr:** That's correct.

**Mr Kwinter:** That is where the government has the control. They can terminate — or not renew; they don't terminate, they just lapse. Unless you get renewed you're no longer a member of the board.

**Ms Farr:** That's correct. Every board member is appointed for a three-year term. They must receive a new LGIC approval to be reappointed to the Hydro board.

**Mr Kwinter:** That is what I meant by government control. They determine who is going to sit on that board.

**Ms Farr:** Yes, they do.

**Mr Kwinter:** If you're going to interrupt it, it has to be for cause. We understand that. There's also a provision that you can only serve two three-year terms. Is that correct or can you go on indefinitely?

**Ms Farr:** That I'm not sure of, sir.

**Mr Kwinter:** Usually the government procedure is that you get two three-year terms. To answer your question about public boards — as I chaired a public board — we at one time did not have public meetings and then there was the same question you asked and we reverted to public meetings, except that one part of it was a private meeting. That had to do with fiscal matters, had to do with employees, had to do with competitive things where it would not be in the board's interest to discuss these openly.

Interestingly enough, when we first announced that these meetings would be public — I used to be chairman of the Toronto Harbour Commission, which is a public body — two or three people turned up and then no one turned up. I don't blame them. They're the world's most boring meetings. That's how it worked.

**Mr O'Toole:** When I was asking about a set of bylaws that would govern such things as the appointments and the terms and set out very clearly the number of terms — there's one member who's been on since 1990; clearly they are in their third term — and the process for appointments, I would suspect there would be some set of bylaws that we'll hear about, like Mr Kwinter has suggested. One's on here since 1990, so I'm not sure. You don't know if they can run as many terms as they wish. In your experience, has anybody served longer than third terms?

**Ms Farr:** I'm afraid I just don't know for sure.

**Ms Brandon:** The act doesn't speak to it, if that's of any assistance, but as you say, it would be within their own bylaws and policies.

**Mrs Fisher:** If I might suggest, it probably comes under the agencies, boards and commissions terms of reference as to the appointments and how they are achieved and derived in terms of the number of repetitive terms. I have to agree that since it is a government appointment to the board, it wouldn't be the board, the Power Corporation Act or anybody who is internal who would decide their mandate or their function or their duration. I think we would find that under the ABCs and they'd be laying it out there.

**1630**

**The Chair:** Mrs Fisher, would you like to have that tabled with you for all agencies, boards and commissions, or just for this? Any information you want specifically about appointments above what's been given out today?

**Mrs Fisher:** I think it would be very beneficial for all the members of the committee to have the extract — it's a board, the Ontario Hydro board, so the extract of the board, the details from the agencies, boards and commissions book, we'll call it.

**The Chair:** I'll ask legislative research to provide that information for us and table it.

No other questions on this topic? We'll move on to the next item.

**Ms Farr:** I'd like to move on to just a brief overview of Ontario Hydro. Much of this information, as I mentioned, is in your background binder, if you want to refresh yourself afterwards. Ontario Hydro has the mandate, as I indicated earlier, to generate supply and deliver electricity throughout the province. It sells wholesale electric power to more than 300 municipal utilities, and Mr Savage will be speaking to that a little later. It also serves more than 100 direct industrial customers, that is, those customers which are large power users, over 5,000 kilowatts. It also serves more than 900,000 retail customers in areas or communities not served by the municipal utilities.

In total there are some 3.7 million customers in the province that are served in one manner or another by Ontario Hydro. It's the largest utility in North America in terms of installed generation. It has 69 hydraulic stations, five nuclear stations, and for those of you who are curious why five, Bruce A is considered a station, Bruce B is considered a station, Pickering A is considered a station, Pickering B is considered a station, and Darlington. That's why there are actually three sites but five stations.

**Mr Kwinter:** People talk about either reactors or stations. So the reactors are greater in number but the stations are only those stations you're talking about.

**Ms Farr:** Yes, there are, for example, four reactors at each of the A and B units as well as Darlington, that's correct. There are also six fossil fuel stations. Hydro has capacity of about 30,000 to 34,000 megawatts of power. That's capacity. That is the amount of installed generation that is sitting at the sites at any given point in time in order to be fired up to provide electricity or energy.

The nuclear stations represent about 60% of that capacity. Nuclear production supplies most of the base load for the electricity system. Base load is basically that amount of electricity that is required on a day-to-day basis, 24 hours a day, day in, day out; that's 16,000 megawatts. There are also some base-loaded hydraulic stations. The remaining hydraulic and fossil stations are used for peaking capacity. That means to meet the load at those times of day when the generation is higher. For example, when we all get up in the morning, flick on the switch, turn on the coffee maker, fire up the stove to have our porridge, whatever, and at the end of the day when we all



go home and flick on the TV to find out what happened in the world, those are the peaking times of the day.

With respect to transmission, there are 29,000 kilometres of high-voltage transmission lines in the province and we have interconnections with a number of neighbouring utilities.

Ontario Hydro's finances: I will cover this in a little more detail in a little while, but let me just quickly go over it. I mentioned earlier it is financially self-sustaining. It doesn't have share capital. It has about \$40 billion in assets and it has annual revenues of close to \$9 billion. The operating and financing charges offset those revenues and the resulting net income is used to retire debt.

Just taking 1996 as an example, revenues were almost \$9 billion. The costs in financing charges were \$8.3 billion. That would have left you roughly about \$700,000 as net income. However, in 1996 Ontario Hydro took some extraordinary write-offs in the area of \$2.5 billion and they ended up with an operating loss of \$1.9 billion. That's compared to 1995 where they had about \$625 million net income.

I think I also mentioned earlier that the province approves Hydro's borrowing with LGIC approval, and that the notes and bonds issued by Ontario Hydro are in fact guaranteed by the province. The province does levy a charge for guaranteeing the utility's debt. It is 0.5% of the debt outstanding and it was roughly \$160 million in 1996. Ontario Hydro does not pay corporate taxes or dividends, but it does provide grants to municipal governments in replacement for the taxes not paid in the order of about \$50 million to \$60 million in 1996. They also pay water rental fees to the province for the use of the water resources and that was in the order of \$120 million in 1996, just to give you a flavour of those costs.

Hydro's current debt stands in the order of \$32 billion. They have a requirement called the statutory debt retirement appropriation, SDR as it is known. It is basically equivalent to about one-fortieth of the outstanding debt; that is, over a 40-year period Ontario Hydro must make enough net income to pay down the outstanding debt. The SDR amount in 1996 was roughly \$600 million.

We've done a fair amount of talking already about the board of directors so I won't belabour that. The board of directors is responsible for the business affairs, and the way they conduct the business affairs is through committees. There are four of them — the audit finance committee, the environment and public policy committee, the human resource and corporate governance committee, and the nuclear review committee. Items that would appear before the board would go through those committees and be approved at those committees and then come to the full board.

The corporation has basically a number of what they call signature business areas, one of them being the generation business area and that would be hydraulic, fossil and nuclear. For the time being, while Ontario Hydro is focusing on the nuclear recovery plans, they have separated out that part of the organization and it resides under Mr Andognini's judgement. The other two, fossil

and hydraulic, are under Mr John Fox. The transmission company, as I mentioned earlier, has 29,000 kilometres of high-voltage wires and they're responsible for operating those wires. The retail signature business areas are the ones that provide the supply of electricity and the services to the end users.

Then we have something called the central market operator. That particular function operates the system. It provides for system operation and reliability. They decide which units will run, what will be purchased, what will be sold in any given day. There are also some corporate business functions. As well as doing things like finance and corporate relations, they also explore growth opportunities and look at business ventures, that sort of thing. Ontario Hydro International and Ontario Hydro Technologies are part of that corporate business signature area.

There is an organizational chart of the utility which was provided in your background binder if you want any more details on that. You'll see that the last few I mentioned, the transmission, the retail and the corporate business are all together under Ms Clitheroe's tutelage at this particular point in time.

**The Chair:** Ms Farr, just a couple of questions I have to begin with: In terms of hydro-electric is there any information available to indicate what capacity is untouched currently in the province of Ontario?

**Ms Farr:** Unrealized potential at this point in time? I do not have that sort of information available to me. I would suggest Ontario Hydro might be able to assist you with that. My sense is that all of the economic hydraulic sites have been utilized by the utility.

**The Chair:** That would be an issue that obviously the ministry would have been interested in, in the past as well as the present, and there must be some information somewhere in the files.

**Ms Farr:** I'm sure there may be some information available. I apologize that I just don't have it available, but I will take it back and see what we have.

1640

**The Chair:** That's all right. Would you just perhaps work through there?

**Ms Farr:** Absolutely.

**The Chair:** I'll also ask legislative research if they can find some information just very quickly on that.

The issue of fossil fuels: Does the ministry have any guidelines in terms of priority of fossil use?

**Ms Farr:** The operation of the system is the responsibility of Ontario Hydro. However, there are obviously air emission regulations that the utility must meet, opacity regulations and other standards that they obviously must meet. We don't regulate what they use and how they use it. We regulate what they put out.

**The Chair:** I understand that answer. That's the same kind of answer I'd get if I was dealing with incinerators and so forth, so I appreciate your response.

But somewhere along the line the Ministry of Environment might have wrestled with the question of — let me just take a couple of different kinds — coal versus natural gas, as a case in point. Is there any evidence to



suggest that there has been some kind of priority in that regard?

**Ms Farr:** No, not that I'm aware of.

**The Chair:** Just a final question I have: I was intrigued with the use of the word "company." I have just a simple Irish peasant background, so you'll have to bear with me for a moment. When I see the word "company," as opposed to, say, "division" or "department," something I'd be more aware of in terms of the corporate structures, can you just explain for me the significance of that? I'll also ask that question of the chairman of Ontario Hydro. Do you know why they would use that?

**Ms Farr:** They have chosen to separate out the organization, as I understand it, into what they call signature business areas. In their endeavours to make the corporation a more business-like entity, they have set them into separate profit centres basically, operate them as companies and demonstrate their effectiveness as individual units.

**The Chair:** So I should attach no particular significance to the word "company."

**Ms Farr:** No.

**The Chair:** Thank you. Mr O'Toole.

**Mr O'Toole:** Just very quickly, in the first overview of the finances you said that in 1996 they had an extraordinary write-off of \$2.5 billion. What is that, briefly? It appears to me that it's a significant amount. There must be a very obvious reason I'm somehow not aware of. A \$2.5 billion write-off in one year is a significant chunk.

**Ms Farr:** Just bear with me here. I'll just give you a quick rundown on what those write-offs —

**Mr O'Toole:** Was it capital, depreciation or something that —

**Ms Farr:** Basically there were some operational write-offs there, things like the Mattagami development, the Bruce unit 1, financial restructuring, some heavy water that upon their estimation no longer continued to have value to the corporation and therefore they wrote them down. They also had the \$400 million associated with the nuclear recovery plan. That was the estimate late last year of what they thought the expenditures would be towards recovering the nuclear system.

**Mr O'Toole:** That kind of leads to my question. If they had a solid, sound management team with some kind of nuclear recovery plan, it seems to have escalated in cost from some \$400 million to some \$8 billion. Were there other internal financial things that deferred certain write-offs? Maybe I'm asking you too much of an inside question, but \$2.5 billion from a previous profit year, if you will call it profit, \$600 million, and then all of a sudden we've gone to \$2.5 billion and now \$8 billion. Maybe somebody knows something that we're trying to find out. How did we get that bad so quickly?

**Ms Farr:** Again, this would be a question that you'd want to ask in more detail of the corporation.

**Mr O'Toole:** Sure. You don't have any insights into that.

**Ms Farr:** Part of their process was their investigation through the independent, integrated performance assess-

ment that caused them to determine that the costs were higher. But I would suggest that the details need to be addressed to —

**Mr O'Toole:** I'm not trying to be flippant, but that couldn't be cited as just cause, could it? You know, who's in charge? I certainly would if I was a shareholder, which I think I am somehow. That's my perspective on it. There's a wide variation there from profit to loss.

**Mr Kwinter:** I have a couple of questions. I'd like to just follow up on Mr O'Toole's question. For an organization that pays no taxes, I don't quite understand why they have to write anything off. Usually a corporation writes off non-performing assets in order to lessen their tax exposure. I'm just curious to know, are these facilities that are totally shut down or are they just ones that are not performing and as a result they've written them down?

**Ms Farr:** I will qualify my answer in that I am not a financial expert. The kinds of write-downs they took were things like the Bruce unit 1, which in their estimation was no longer of value because the amount of dollars to recover a unit like that would have been far and away more expensive. That asset was severely impaired, and therefore their decision to write it down.

Again, in terms of a more detailed answer, you'd have to direct to Ontario Hydro.

**Mr Kwinter:** One other question. The 0.5% guarantee fee: Is that actually paid or is it capitalized as part of the debt?

**Ms Farr:** To my knowledge, it's actually paid.

**Mr Kwinter:** I'm just curious. Okay.

**Mr Galt:** I have several unrelated questions, if I may. I understand we're connected with the US and Manitoba sometimes to pick up power or sell power.

**Ms Farr:** That's correct.

**Mr Galt:** What about Quebec?

**Ms Farr:** Yes, we're connected to Manitoba, to Quebec and to some utilities down in the States as well.

**Mr Galt:** So there is a connection between Ontario Hydro and Quebec. I didn't pick that up earlier.

**Ms Farr:** Yes, there is.

**Mr Galt:** I'm kind of caught off guard. I knew some of this before, but there's corporate taxes, no dividends and there's all sorts of grants in lieu of taxes. They have been traditionally in a very favoured position. Do you have any feeling of how we arrived at this or the original decision to give Ontario Hydro such a favoured position in the economy?

**Ms Farr:** I believe the derivation of all of this was from the Power Corporation Act in that they were given special powers, but at the same time it was counter-balanced with the obligation to serve etc. There were puts and takes, the result of which was that they do have a tax-exempt status.

**Mr Galt:** The concern I have is, and it's really maybe a little tangential here, but in my riding a private plant competing with Ontario Hydro pays 20 times or thereabouts in local taxes compared to the grant in lieu of taxes.

Anyway, there are four board committees. Who sits on those boards? Is that part of the board of directors of Ontario Hydro?

**Ms Farr:** That is part of the board of directors and various board members sit on each of those individual committees. They may sit on more than one. They may sit on two or three, as does the chair of the board of directors.

**Mr Galt:** The chair would sit on all four committees?

**Ms Farr:** The chair sits on some, I'm not sure if all. I would have to verify that for sure.

**Mr Galt:** Just a little clarification there. You mentioned the chair and the president and CEO. Who appoints the president and CEO of Ontario Hydro? Is that the board of directors or is that the Ontario government?

**Ms Farr:** The president and CEO is by the board of directors.

**Mr Galt:** Some 29,000 kilometres of high-voltage wires: Are we talking individual wires or corridors?

**Ms Farr:** We're talking about 29,000 kilometres of lines. There might be multiple lines on, for example —

**Mr Galt:** So rows of towers then?

**Ms Farr:** Yes, lines.

**Mr Galt:** So that's a group of lines on those towers?

**Ms Farr:** Yes.

**Mr Galt:** Okay. Sorry to be nitpicky but —

**Ms Farr:** There might be four sets of wires.

**Mr Galt:** You might have two towers side by side, so each kilometre would be counted as two.

**Ms Farr:** Each kilometre of line, which might have multiple towers on it; might have five lines on it, might have —

**Mr Galt:** So if you had multiple towers down a corridor, then that would just be considered as one kilometre, you're saying.

**Ms Farr:** One kilometre of transmission line.

1650

**Mr Galt:** The last one relates to when Ontario Hydro in the past has been building — and I'm thinking of something like Darlington. I don't have any figures, but the impression I got was that it kept getting bigger and bigger and bigger in the cost. Is that all internal? Do they contract out? Is there any limit to how this takes off and gets so monstrous in a building project such as that one?

**Ms Farr:** Ontario Hydro obviously would be the designer of the particular facility. For example, when they were building Darlington, there was a large influx of construction employees who would have been temporary construction employees to help with the construction of that facility who would not continue with the corporation after the facility was complete.

**Mr Galt:** Maybe what I'm trying to sort out is, once the Ontario government gave the okay to go ahead with Darlington, it was going to cost X and it turned out it cost four times X plus Y and Z or whatever, and I'm only using that, what kind of checks and balances does the Ontario government and maybe Ontario Hydro have to try and contain those escalating costs?

**Ms Farr:** The capital expenditures are approved by the board of directors, so the Ontario Hydro board of directors

would obviously be responsible for approving those funds and monitoring those funds presumably, as would obviously senior management, and it would be based on management's proposals and management's revisions to estimates that the board of directors would release further funds for the further construction of facilities. It's the Ontario Hydro board of directors that is responsible for those decisions.

**Mrs Fisher:** I'd like to ask a little bit about Ontario Hydro Technologies and Ontario Hydro International. I understand that they're the corporate business entity now. They weren't always there, as I understand it. Am I right with that? There was a new division set up more recently, I think, called corporate business or business corporate or something. Could you give me some idea of when that happened?

**Ms Farr:** You're quite right. Ontario Hydro International and Ontario Hydro Technologies have certainly not been around long in the lifetime of Ontario Hydro. I believe Ontario Hydro International, for example, was incorporated in 1993 and OHT came into existence around that point in time.

Certainly some of the functions definitely predated that in terms of new business ventures. There was a new business ventures arm of Ontario Hydro which looked at some of the same things. The intention of these particular entities is to sell or to promote existing expertise and existing technologies within the organization that had already been developed for the organization. They felt that there would be potential opportunities outside the organization where they could perhaps capitalize and get back some of the investment dollars that had been spent on items that they had to develop already for their own use internally.

**Mrs Fisher:** Between the two of these, would I be right in saying that some of their past decisions did some things like this: either consider or buy rain forests or different types of light bulbs, refrigerators, windmills or solar panels? Am I right? That's where all that type of business took place, either inside Technologies or International? I'm asking.

**Ms Farr:** I wouldn't say that all of those things took place inside of there. They didn't buy rain forest in Costa Rica, but —

**Mrs Fisher:** Just got close.

**Ms Farr:** Certainly, for example, the windmill that you talk about was part of their renewable energy technologies, which was outside Ontario Hydro International or OH Technologies. The OH International and OH Technologies were to use existing technologies that had already been developed in house and take them out to the outside community and potentially recoup some of the moneys that had been spent on those; for example, power pack. I can't remember exactly what it was called, but they were little remote, battery-operated — Enerpak I think is what they were called actually. They had developed them internally and they took those to the outside community and said: "Are you interested in this?"



Potentially we can recover some of the investment dollars we spent to develop it because we had to."

**Sound technology:** Having fish repelled from the intakes of generating stations because they foul up the intake area. They had to develop technology to repel the fish from coming inside there and clogging the intake valves. They used that and determined a way to turn it around and attract fish, and they would look to see whether there were external applications for that. Those are the kinds of things that these particular entities were involved in.

**Mrs Fisher:** You can see where some of those, or maybe another opinion would be all, would be of benefit to the corporation. But I have heard questions over the history as to how viable some of those exercises have been, and at what cost and at what losses. What I'm trying to understand here is, in this big, corporate structure — coming back a little bit to the Chair's question earlier with regard to it really doesn't matter whether it's a division, a department or a whatever, they are all intertwined right now.

**Ms Brandon:** Actually Ontario Hydro International, though, is in fact a subsidiary corporation, so it does have the legal status of a corporation, as opposed to their transmission company, which is really just a business unit within. Ontario Hydro International is a sub of Ontario Hydro, therefore the liabilities should flow back to Ontario Hydro International and not to Ontario Hydro.

**Mrs Fisher:** But the decisions that are made with regard to its business and its activities are still those made by the board then. Ultimately, whatever they do must come to board approval, or do they? That's the question I'm asking. Do they come to board approval or do they independently decide?

**Ms Farr:** Ontario Hydro International does have its own board.

**Mrs Fisher:** So it no longer then is attached as a —

**Ms Farr:** The board members are also members of the corporation. For example, Mr Farlinger would be a member of that board. But the purpose of the incorporation was so that any activities they would engage in would be completely contained within that subsidiary company and not come back to the parent company.

**Mrs Fisher:** My question then would be, if they run into an indebtedness issue as opposed to a profit-making and self-sustaining unit, who ultimately then is responsible for that?

**Ms Brandon:** If they run into indebtedness?

**Mrs Fisher:** Yes. If they try to operate independently as a private incorporation, yes, with some of the same board members, but my assumption is that technically speaking you have the Ontario Hydro corporation and you have Ontario Hydro International over here. Yes, you have commonality of the board membership, but it's an independent business. Are the generated revenues taxable?

**Ms Brandon:** I don't believe they are. I believe in the end from the accounting perspective there is an auditing process and an accounting process from Ontario Hydro International up to Ontario Hydro. But with Ontario

Hydro's books I think they in fact have to show all of their subsidiaries on their own reporting audits themselves.

**Mrs Fisher:** In the end though, if they're independent per se for business corporate practices, their indebtedness then should not fall back to the Ontario Hydro books.

**Ms Brandon:** I believe what the government has attempted to do, with that thought in mind, is to try to stay aware of and keep some limitations on how much money is actually flowed over to Ontario Hydro International so that the loss is contained and the ratepayer is protected.

**Mrs Fisher:** Do we know if in the last year or two they've been a profit-generating independent corporation?

**Ms Farr:** They were in 1995.

**Mrs Fisher:** They were?

**Ms Farr:** Yes. In 1996, I think they were very close to zero but made a small profit.

**Mrs Fisher:** One other question on this issue of renewable energy technologies: Where does that fall now in the big picture?

**Ms Farr:** Ontario Hydro Technologies?

**Mrs Fisher:** The renewable energy technologies.

**Ms Farr:** Oh, the renewable energy. It still resides under, I believe, environment, health and safety. Rod Taylor is acting in that capacity.

**Mrs Fisher:** Of the four divisions of Ontario Hydro though, the four subcommittee areas, you've got nuke, you've got genco, you've got chief finance and you've got chief development and transition. Does it fall in there?

**1700**

**Ms Farr:** What I'm indicating to you is that it actually is above here, in the environment and health and safety.

**Mrs Fisher:** Oh, I see.

**Ms Farr:** The renewable energy technologies was a special project and resided up here.

**Mrs Fisher:** Is this supposed to be a self-sustaining unit as well?

**Ms Farr:** Renewable energy technologies?

**Mrs Fisher:** I guess all of Ontario Hydro is supposed to be a non-profit corporation, but is it turning out to be a self-sustaining unit without debt?

**Ms Farr:** Are you talking about renewable energy technologies?

**Mrs Fisher:** Renewable energy technologies.

**Ms Farr:** My understanding of the renewable energy technologies, and they were pulled back for a rethink at the beginning of this year, was that they were going to spend some dollars to promote renewable energy technologies that are not necessarily cost-effective right now, but for them to eventually have a place, some moneys needed to be spent to develop those technologies. Ontario Hydro was going to spend additional dollars to promote that, so no, they're not cost-effective at this point in time. I would like to say, though, that they have pulled back on that program and are currently rethinking it.

**Mrs Fisher:** How much influence does the ministry have? I'm still foreign to understanding where this mesh happens between ministry, which I understand advises a minister, and a separate corporation over here which advises its board and then a decision is made indepen-



dently. I understand that and I respect that's the status as it operates today. But if the Ministry of Energy was to analyse renewable energy technologies as an example, who would they advise if they didn't feel that renewable energy technologies were in the best interests of Ontario Hydro when Ontario Hydro's 1906 mandate was to produce electricity and sell it?

**Ms Farr:** I'm not sure I understand your question. Who would advise whom? I'm sorry.

**Mrs Fisher:** Would the ministry play any type of an advisory capacity to anybody? The minister obviously is supposed to be at arm's length from the decision-making of the board of directors of Ontario Hydro. This is a bit of a complex question here, but you have this public corporation that has responsibility with a board of directors to make its own decisions based on the Power Corporation Act. I would never swear that I've read every part of the Power Corporation Act word for word, but I think that's something I better do. But having said that, does the Power Corporation Act address renewable energy technologies and how they will operate?

**Ms Farr:** No, it doesn't specifically address renewable energy technologies, but you will remember that in the early 1990s the government was quite supportive of renewable energy technologies and the corporation was also supportive of sustainable energy development. The energy priorities and the business of the corporation were in sync as they related to those types of topics.

**Mrs Fisher:** You're getting close to the subject I'm trying to get at here. We know that the government was supportive and we know that Hydro was supportive. Somewhere there must have been a crossover of thoughts, ideology or something, which I'm not knocking. I'm just trying to get to understand how that influence of government gets over to the operating status of a corporation that by the Power Corporation Act doesn't have the mandate to do that specific duty. I'm trying to get to understand how you get over there and who makes that decision that they should take on that new venture at whatever cost.

**Ms Farr:** It's the decision of the Ontario Hydro board of directors. They are obviously familiar with the energy priorities. They obviously have fiduciary responsibility in the corporation. Corporations do make decisions to spend research dollars or whatever, and they would make decisions as they feel appropriate. At that particular point in time the RETs program was accepted by the Hydro board of directors as a prudent activity for the utility to be in.

**Mrs Fisher:** Coming back to Mr Laughren's question earlier, now I'm starting to see a bit of a tie-in here I didn't understand before. I'm trying to differentiate between the role of government and how it does its business and how in fact it gets to communicate with Hydro, which it ultimately is responsible for in terms of long-term debt. That's one of the reasons we're here today. I guess it comes back to the position of the non-voting status of an assistant deputy minister, is it —

**Ms Farr:** The deputy.

**Mrs Fisher:** — the deputy minister who attends boards but in a non-voting capacity. Is it at that stage that this information of government is shared? I can't understand. If the function is there, what does that person do at those meetings? Do they communicate?

**Ms Farr:** Well, I certainly hope so. I'm not privy to the Hydro board meetings. There are a number of ways in which the minister and the chair communicate to ministry staff and in which Ontario Hydro staff communicate. There are meetings between the minister and the chair on an occasional basis. Ministry staff speak to Ontario Hydro staff on a very regular basis to understand the issues of the day. There are a lot of areas where we do communicate.

**Mrs Fisher:** I don't mean to prolong it and I'm not going to, but I appreciate trying to get that connection, because first of all I do support that there has to be some type of cross-communication. Obviously there has to be someone who makes a decision in the end based on something. I was just trying to understand that tie. You always feel that if you dare talk over there, you're crossing a line of what you're allowed to do or not allowed to do versus trying to find out what Hydro's up to in the real world today and where it's going and that type of thing. I appreciate that and I see that there is a formalized role through the board, in a non-voting capacity of a position but also that more open role as well, to convey to each other's thoughts back and forth. I'm not being negative about it. I was trying to figure out how that ever happened.

**Ms Farr:** We also communicate through the more formal processes, like orders in council. I gave you a whole list of things on how we communicate.

**Mr Kwinter:** I'd like to spend a bit of time with Ontario Hydro International, the consultancy part of Ontario Hydro. If they're consulting on the Three Gorges project in China, does that come under that?

**Ms Farr:** I believe Ontario Hydro International did do some work with Three Gorges, but I just don't know what the outcome of it was.

**Mr Kwinter:** No, no. All I want to know is, is that where it is? It would be in that section?

**Ms Farr:** Yes. It basically would be in pursuing international projects. They would sell their consulting services. They might sell some of their technologies. Those are the kinds of things Ontario Hydro International would become involved in.

**Mr Kwinter:** Would they also provide actual general contracting facilities to other countries where they would actually be building facilities?

**Ms Farr:** They would certainly provide consulting services. They would have project engineers, for example, whom they would be contracting out. For example, I believe they had some OHI staff present in India assisting with the construction of the facility.

**Mr Kwinter:** The reason I'm asking is that it would seem to me that in any kind of relationship the corporation, Ontario Hydro, would almost automatically have to guarantee any of the obligations of any of their subsidiaries. Usually you're dealing with sovereign contracts. There are very few private people who get involved

in these projects. They're usually government to government and Ontario Hydro acting as an agent of the government in doing these things, either for Ontario or for Canada. My only question is, if any of these things have a loss, is that covered? Does that eventually come back to be paid by the ratepayer or is that something —

**Ms Farr:** No, typically Ontario Hydro International is providing consulting services or contract services where they're saying, "We are paid to have five people who have expertise in a particular area consult to you." It's like Acres Consulting having a consulting contract in India to help with the construction of a particular generating facility. It would be no different than that.

**Mr Kwinter:** But they don't actually do the construction. They just provide the —

**Ms Farr:** Expertise.

**Mr Kwinter:** — technical expertise without actually doing the project?

**Ms Farr:** Yes, that's correct.

1710

**Mrs Johns:** Under the Power Corporation Act, Ontario Hydro has a statutory requirement to repay part of its debt every year. Under the plan they're proposing presently, they would not make payments on that debt for a number of years. If this committee were to agree to that, how would we change the legislation to allow that to happen?

**Ms Farr:** I believe there's actually a provision in the PCA that does allow, with LGIC approval, for periodic times that this amount could not be repaid. There would need to be an order-in-council application that would be agreed to by the government to do that.

**Mrs Johns:** My second question is as a result of some reading I've been doing recently and your discussions on the human resource committee. There's quite a bit of talk in newspapers and in articles I've been reading about the — well, first of all, with this IIPA report there's quite a discussion on the lack of human resources within Ontario Hydro. When you follow that back far enough, you come to the point in the last eight years or so where they gave a buyout package to a number of people within Ontario Hydro. There is some question about whether those buyout packages, offered under the auspices of Maurice Strong, were really the right business decision to make. So I guess my question is, would the human resource committee have had to approve those buyout packages and the decisions to change human resources in Ontario Hydro in the last eight years?

**Ms Farr:** The human resource subcommittee of the board would have reviewed the board memoranda provided to them for board consideration on downsizing packages, which is what they were called in the early 1990s. So the human resource committee, or whatever its equivalent was, because it may have not had exactly the same name at that point in time, would have reviewed the board memoranda and would have agreed on the package.

**Mrs Johns:** Can you get me the people who have been on the human resource committee since, let's say, 1985?

**Ms Farr:** Yes.

**Mr O'Toole:** We're actually delving quite deeply into some of the financial stability, or lack thereof, of the organization. I'm going back. I'm looking at the decommissioning costs. It's part of the report you provided for us. I'm also keeping in the back of my mind that under their own annualized budget they've got to have this SDR kind of added on to the end of what the real thing is and we've got to make this one fortieth of what our debt load is.

Whenever I look at it and I start to read that background on each year, I've always wondered about the future decommissioning costs, how and where they're carried. I'm told it's like \$100 billion to close a nuclear plant because of the radioactive life and the need to monitor all these costs, that they collect each year some \$22 million towards decommissioning costs and \$106 million for future waste disposal. Those are collected by customers as part of the rate, part of the nuclear overhead, if you will. That shows up in kind of a vague way in their balance sheet under Hydro assets, but really it's used to discharge future borrowing. So it's used as kind of operating revenue really and it's just added on to the debt while at the same time we've got this SDR plan which we're considering possibly zipping out of the financial picture for a while to give them some relief.

I request the committee to have a little more clarity. I don't have the privilege of their annual statement. I haven't read it, but I will when it's provided. I'd like it to be clarified with respect to just those two things. Internal borrowing is the actual cost of doing business, because you're putting a surcharge on the cost of power, collecting the money, using it to offset operating costs, which really amounts to about the same amount of money as the SDR. You know, we've got to make profit, that number, the \$600 million number. I find the accounting, from a very primary perspective — I want to qualify that; I'm not a CA, I don't know much about it — rather circuitous, meaning rather that it's devious actually, without being suggestive that it's marginally accounting magic.

To me, that whole area is further complicated when I look at some of the strategic business units as you've described them to the member for Bruce. Who assumes the liability? There's no share capital. There's none of that. There's no traditional — they've got the guardianship. The first page here says it's \$32 billion in debt.

**Ms Farr:** If I could just —

**Mr O'Toole:** That's cast against some knowledge of asset value, which to me is ridiculous; they don't have any assets.

**The Chair:** Mr O'Toole, I think Ms Farr has got the question clear now. So we'll just —

**Mr O'Toole:** Do you understand what I'm saying? I find it almost devious from the point of view — when I look at —

**The Chair:** Mr O'Toole, I think she has the question right in hand. Now let's see if we can hear that answer for a minute.



**Ms Farr:** What I'd like to clarify is that Ontario Hydro does collect funds from ratepayers towards the future decommissioning of its nuclear facilities — and fossil facilities, for that matter, for all of its facilities. It collects those moneys. It views it as a liability as opposed to a separate fund. You are absolutely correct. It's listed as a liability on the book. At the end of 1996, it was in the order of \$2 billion. Those funds are available to the corporation to reduce borrowings — absolutely. I would like to point out a couple of things. The treatment Ontario Hydro uses is not exclusive to Ontario Hydro. In point of fact, it is consistent with other jurisdictions, particularly jurisdictions that are also public utilities. There are private utilities that have segregated funds, ie, they set that money aside much like a pension fund, but there are a number of public utilities that operate in exactly the same manner as Ontario Hydro, so it's not unique to Ontario Hydro. I'll just point that out to you.

With respect to your figures, yes, they are \$22 billion towards decommissioning and \$106 million, as you quite rightly picked out, towards future disposal costs. In terms of the size of the liability, ie, what it could be, there is definitely a range of estimates out there. Ontario Hydro would be the one to speak more intelligently to what that range is, but Ontario Hydro has made an assessment of what they think is a reasonable estimate and are accruing funds based on that estimate.

**Mr O'Toole:** It's even more complicated than that, unfortunately. I will need to have some time to think about the numbers myself, to analyse, even to ask a decent question. When I hear that the useful life of a nuclear plant is some 40 years and then its unuseful life has some annualized costs attached to it, for decommissioning and the rest of it, I'd suspect it should be clear to us what those two pictures are. This little stipend on the rate should be part of that. I should be able to say, "Okay, if they tell me they can produce kilowatts per hour, does that include all those numbers?" That's kind of where I want to get to. Do you understand? If they can say, "We can compete with Michigan or Quebec," the deferred cost of borrowing is part of the cost. If I'm using internal cash flow to offset my real cost of capital, that's a cost that's real if I don't save the money.

You've been very thorough and diligent in your responses, and you're right that with you I'm only preparing to ask a more sophisticated question later on in the process. But I qualify it as a very novice person looking at that: "Gee, yes, we're really competitive with the rest of the world on nuclear." Yes, right.

**The Chair:** Mr O'Toole, you'll be comforted to know that on Monday next you will have the opportunity to re-pose these questions. I have no doubt that those who will be deputing that day will have read Hansard and will be prepared for some of the answers.

1720

**Mr Kwinter:** Ms Farr, if I can just get a clarification, you say that the Power Corporation Act provides for a deferral of the SDR into the future. Is that a deferral or a forgiveness?

**Ms Farr:** No, my understanding of it is that they still have a requirement to pay down their debt. It's simply that they defer for a period of time their requirement to meet the SDR requirement.

**Mr Kwinter:** What I'm trying to determine is that if you don't —

**Ms Farr:** You don't forgive debt.

**Mr Kwinter:** I'm not talking about forgiving the debt. That's a \$600-million opportunity cost you're losing if you don't get that \$600 million. Does that get added on to the debt or is it just a wash, that it doesn't reduce the debt, but it doesn't increase the debt?

**Ms Farr:** It simply means that those moneys are not available to pay down debt, so their debt would continue to be higher than it would have been had they made that net income which is at least the SDR requirement.

**Mr Kwinter:** There's no accounting for that, there's no compensation, there's no sort of premium that accrues as a result of not paying it? It's like me. If I don't make my mortgage payments, my mortgage may not go up but the mortgage company is forgoing that income. There's got to be something. They don't just say: "Oh well, it's okay. Don't bother paying me your mortgage payment this month. Pay it to me next month." There's got to be some provision.

**Ms Farr:** The interest accrues on the outstanding debt each and every year. Again I preface my comments by saying I'm not a financial expert.

**The Chair:** Next Monday there is the opportunity for that one, Mr Kwinter.

**Mr Laughren:** I think Mr O'Toole was asking some interesting questions. I think just because he's not an accountant, that doesn't make them illegitimate by any stretch of the imagination. First of all, being first before the committee means you're getting questions that really should be directed at Hydro. We're coming to understand that.

What I wondered about was, I think you said Ontario Hydro has set aside \$2 billion as potential future decommissioning costs, something like that. Am I correct?

**Ms Farr:** Yes, \$2 billion at the end of 1996.

**Mr Laughren:** What I wondered about was the role of the ministry. I think that's more the kind of question you could answer. Does the ministry review that number with a view to whether or not it's a realistic number or whether it's just a convenience for Hydro to put in a number that's in the billions? I think most of us would concede that it doesn't come close to what decommissioning would really cost.

As a matter of fact, I can remember way back when the nuclear debate was raging that the three main concerns by people were (1) the cost, (2) the disposal of the waste and (3) decommissioning costs. All three chickens are coming home to roost. No comments about the chickens glowing in the dark, either, Mr O'Toole.

I wonder what role the ministry plays in reviewing Hydro's numbers to determine whether or not they're a convenience for Hydro or a realistic number.



**Ms Farr:** I'd like to mention just a few things. The amount of the acknowledged liability at this particular point in time is \$2 billion at the end of 1996. That doesn't mean that is all the dollars they are going to collect.

Their premise I think is that it will be around the year 2025 before they'll actually have to physically put the used fuel somewhere and that by the time they get there, they will have sufficient funds to pay for whatever that facility may be.

As we may know, the federal government is currently looking at what sort of disposal of used fuel — what is the mechanism etc.

**Mr Laughren:** Forgive me, but there's more to decommissioning than the storage of fuel rods, right?

**Ms Farr:** Yes, absolutely. With respect to the responsibilities for used fuel management and determining the amount of funds, that is the responsibility of the Ontario Hydro board of directors. The ministry does not review and approve those expenditures.

I would like to point out, however, that the Atomic Energy Control Board has a role to play here in that they are responsible for the control and safety of the nuclear facilities and, as part of their new act, the Nuclear Safety and Control Act, they are looking at regulations specifically associated with financial guarantees and dollars allocated to decommissioning and used fuel management. So there is also that authority as well, and you may want to query the ACB when they appear before you.

**Mr Galt:** It may go without saying, but I am just going to make the comment that Ms Farr's presence here is to explain Electricity 101, so to speak, and not to defend Ontario Hydro. I hope she doesn't feel she is being put in a position to defend Ontario Hydro —

**Mr Laughren:** It's indefensible.

**Mr Galt:** — because that's certainly not the role today. I'd also remind members to be mindful of the clock. We would like to, if at all possible, get through this by 9 o'clock tonight. However, there is tomorrow, but it would be nice if it could be wound up tonight. I'm not telling them what to do or how to do it, but just kind of a gentle reminder.

**The Chair:** Thank you, Mr Galt. You know we continue tomorrow as well with the technical briefings. I appreciate that. Your exhortation is well taken. I think most people realize that, but we are trying to plumb some important depths here.

Part of the reason I've been allowing a little bit of latitude has been the role of the deputy minister and the linkages there. I think there is some importance in making sure the committee is very clear on what that linkage is and what it implies. But we'll be conscious of any of the questions, such as the ones posed by Mr O'Toole, appropriately addressed to Ontario Hydro on Monday. Do you have more points that you want to raise?

**Mr Galt:** We'll just enjoy them on Monday, very much so.

**The Chair:** Mrs Fisher?

**Mrs Fisher:** I just have one. Taking a step further, I agree that Ontario Hydro accounts for in a way its

responsibility for long-term funding requirements for decommissioning of all natures: fuel handling, fuel storage, decommissioning of site, whatever tear-down of whatever type might happen.

As it stands right now, that does not fall under any jurisdiction of anybody else but Ontario Hydro to ensure they have that funding there. Am I right?

**Ms Farr:** It is their requirement, their responsibility to make sure they have sufficient funds to put back what they have changed.

**Mrs Fisher:** I don't have a financial statement in front of me, but would I be right in thinking that, given that the normal life of a unit is 40 years with some major remedial work expected at the midlife stage, 20 to 25 years, in all probability they maybe haven't kept up with banking that reserve fund on the expectation of an earlier shutdown?

I cite unit 2, Bruce A, as an example. If they chose not to restore unit 2, for example — there are all kinds of reasons why it has additional costs — would I be right in thinking that perhaps they're a little bit ahead of their anticipated financial planning to provide enough money to do the full, not layoff, but now formal shutdown of that unit independently?

**Ms Farr:** I don't want to speak to the details of all the specific assumptions in Ontario Hydro's decommissioning plans that lead them to say, "We will charge whatever it is per kilowatt-hour to each customer." That's best directed at Ontario Hydro.

Just so that we're clear here, because a unit is shut down does not automatically imply that you need to decommission it immediately. In point of fact, these facilities will sit there for a period of time, likely a long period of time, before what you would call the major decommissioning takes place.

Even the site itself has to be brought to a certain environmental level before they can go in there and do certain things. So their assumptions are towards certain life expectancies, towards certain cool-down times, and I don't want to use that word incorrectly. They have certain expectations that they will have to do it. I believe the current expectation is that about the year 2025 is when they will physically have a facility where they would, for example, put used fuel etc.

1730

**Mrs Fisher:** I agree that we shouldn't get into the specific detail, but let me ask this question in a broader sense and in a general picture. If one of the series of A units — Pickering or Bruce or whatever right now — did not come back up, would you agree with me that this would put a larger onus financially on Ontario Hydro to have available to them the funds for the long-term storage? I agree with you — I understand the phased shutting down process etc. Would that not appear to be maybe a shortfall in the planning right now, financially?

**The Chair:** Ask our consultants that.

**Mrs Johns:** If this is a stumbling block, that's why we pay this gentleman. Tell us something about it.

**Mr Campbell:** There have been a number of questions where I might have been helpful to the proceedings

tonight, but this is not one of them. It's best left to the financial experts for Ontario Hydro to explain all the assumptions under the decommissioning funding provisions. I think Ms Farr has gone as far as she can and as far as I know I can. It's best left to another witness.

**Mrs Johns:** Can you just tell us what decommissioning would involve, since we've kind of got into that, from your perspective as a nuclear expert?

**Mr Campbell:** I'm not quite a nuclear expert but I'm an expert on some matters. With respect to decommissioning, envision a return to a green field. That is, you have a nuclear plant now, and over a long period of time the expectation is that you move back to what was there before. With respect to a nuclear plant, that takes a great deal of planning and a great deal of time. The provisions that Hydro has accounted for deal with the fuel, most important, and then second with the equipment and machinery and all the lower-level radioactive waste associated with the facilities.

**Mrs Fisher:** One other question: I understand the regulatory requirement to ensure that all that happens lies with the AECB and Hydro has to meet those requirements. My question is this: Who has the responsibility to determine at what stage in the game, in the bigger picture now, let's say, the permanent shutdown and the long-term monitoring, if you will? Who decides that? Is that Ontario Hydro board or is that AECB?

**Mr Campbell:** I think you will find there are aspects of it that are shared. Certainly AECB prescribes, but Ontario Hydro in its duty will have a great deal of detail on all those questions. I'm certain that the financial people at Hydro, considering the fact that there is a potential for some nuclear units to be decommissioned earlier than some of the assumptions may provide for, would have all the detail you would require.

**Mrs Fisher:** I have one final question. I know that somebody this year was going throughout Canada and Ontario holding public forums with regard to long-term, high-level waste storage.

**Mr Campbell:** Yes.

**Mrs Fisher:** Was that AECB or was it Hydro?

**Mr Campbell:** That was the federal government, an environmental assessment review process sponsored by the federal government.

**Mrs Fisher:** In the end, they will determine what process will be handled to take care of these —

**Mr Campbell:** The initial hearing is with respect to the concept of deep rock disposal, and a report from what is referred to as the Seaborn commission is expected later this year on the concept and what would be practical to proceed with.

**Mrs Fisher:** That's not AECB, though, is it?

**Mr Campbell:** No, it is the federal government.

**Mrs Fisher:** I would suggest that this be one of the parties that we invite to come before us. I think it's very significant right now with regard to potential cost, the timing of those costs and the responsibility, where it lies and what Ontario Hydro and the province might be up against.

**The Chair:** Who is the lead ministry on that?

**Ms Farr:** The federal Department of the Environment.

**The Chair:** All right? The committee agrees.

**Mrs Fisher:** I would also recommend that if there is any possibility of trying to get that person back to back with the AECB, it might help the committee in terms of understanding the areas of responsibility. I just think it would be useful to keep them together if you can because they will, in the end, determine where all this stuff ends up.

**The Chair:** AECB is scheduled currently for Wednesday, October 8, so we'll check to see if there is any convenience for that to happen as well in terms of timing, keeping in mind the need of blending in some schedules. I'll try and do that.

**Mrs Johns:** I'd like to ask a process question here. I heard this gentleman say that there were some issues he could have helped us with along the line. Obviously, they don't feel comfortable with putting these data before us. What is the process going to be here when they feel they have something to add to this committee?

**The Chair:** I'm glad you raised that because I haven't had an opportunity to meet with them. As you will understand, this committee began to meet and went through the process of selecting its staff and we carried on in the briefing. I was proposing in about 20 minutes from now to sort that out and have an answer for you when we come back at 7 o'clock. I have also asked in the meantime that if either of them perceives some difficulties in the short run, they just give me a very quick time-out request for a moment, let me have a fast consultation and we'll go from there.

**Clerk of the Committee:** If I could just add, they'll be sitting at the table as well, so they'll be able to indicate when they want to get in.

**The Chair:** We'll try to sort that through, because they are there to help us and they are there to help us pose questions. They might even perhaps give some assistance to crystallize where the questions are best asked. Right now I know there is a great deal of interest in getting questions on the table. In some cases I think we have probably abused Ms Farr just a little bit in terms of some questioning because we've gone beyond her mandate and responsibility, but I can understand why, so I've been a little easygoing in the first round to do that.

But I think we start to crystallize and focus our questions on the appropriate agencies, and now that we have our staff with the committee, we can begin to do that. Give me the dinner hour to work on that and we'll work our way through this over the next hour or so, but I appreciate that question. It was insightful.

Any other questions on this topic? I have a couple to go back to just very quickly, Ms Farr. The OHI is an intriguing one, and OHT. You indicated in your response to questioning that the OHI has its own separate board.

**Ms Farr:** Yes.

**The Chair:** That board consists of individuals who are also members of the OH board.



**Ms Farr:** Yes, some members are members of the OH board.

**The Chair:** Are there some members of the OHI who are not members of the OH board?

**Ms Farr:** Yes.

**The Chair:** Are they corporate members or are they laymen outside OH?

**Ms Farr:** Corporate members.

**The Chair:** They are employees?

**Ms Farr:** Yes.

**The Chair:** They are voting members?

**Ms Farr:** Yes.

**The Chair:** I see. Let me ask you: That board is fully empowered under the Corporations Act?

1740

**Ms Brandon:** Actually, the Power Corporation Act gives authority for Ontario Hydro, with approval of the LGIC, to create a sub, and that's pretty much all the act says about the sub. Its existence is authorized under the PCA but you won't find much more direction for the sub under the PCA itself. It would really be incorporated under the Ontario Business Corporations Act.

**The Chair:** So it's incorporated under Canadian charter?

**Ms Brandon:** Ontario legislation.

**The Chair:** And it has some members of the board who are employees of Ontario Hydro?

**Ms Farr:** Yes.

**The Chair:** Are the board members paid an annual remuneration?

**Ms Farr:** Not that I'm aware of. Because they are corporate employees, they're not paid a per diem or a salary.

**The Chair:** Are OH board members paid?

**Ms Farr:** The full board?

**The Chair:** If an OH board member is a member of the OHI board, are they paid separately for the OHI membership?

**Ms Farr:** Maybe I can just clarify: Ontario Hydro board of directors members who are non-corporate employees receive the annual remuneration and the per diem. If they are corporate employees, they do not.

**The Chair:** I really do understand that and I appreciate it. You've very precise. It's a small matter but just one I want to make sure is very clear in my head. If Ms X is a member of the Ontario Hydro board and Ms X is then appointed to be a member of the OHI board, is Ms X paid to be a member of the OHI board as well?

**Ms Farr:** No, because all of the members of the OHI board are also corporate employees. For example, Ms Clitheroe is a member of the Hydro board of directors but she is also a corporate officer. She also sits on the OHI board. She is not paid other than her normal remuneration. None of the OHI board members are non-corporate employees.

**The Chair:** So all OHI board members are employees?

**Ms Farr:** Yes.

**The Chair:** Are there debts accrued to OHI?

**Ms Brandon:** I'm not aware of their financial statements. I can't answer that myself.

**The Chair:** You wouldn't know what portion of the \$32 billion OH debt would be OHI?

**Ms Brandon:** I personally don't know.

**Ms Farr:** I'm not sure that they have a debt.

**The Chair:** I've gone into an area that is not necessarily in your area anyhow, so I will ask Ontario Hydro about those areas.

Let's go on to the next section. We have another few minutes before we break.

**Ms Farr:** Okay. Actually, it's opportune. I will just finish off the Ontario Hydro segment and then the Ontario Energy Board and the Atomic Energy Control Board we can deal with afterwards.

I just wanted to speak to some of the load information and business planning information related to Ontario Hydro. Again, this is a snapshot. For more detailed information, you'll likely want to speak with Ontario Hydro representatives.

Just to give you a thumbnail sketch: Over the last five years Hydro has made some relatively conservative assumptions about sales growth. It's in the range of 1% to 1.5% a year. It's the load growth projection they've used to determine their costs and revenues. Having said that, though, over the last five years the actual load has in fact been below that.

Electricity sales in Ontario peaked in 1989, before we saw the cumulative 30% increase in the electricity rates over the three-year period 1990-92 and the recession of the early 1990s. It's quite likely that electricity sales in 1997 will still be below 1989 levels. In 1996, Hydro forecast sales would grow by 0.8% in that year and sales were actually flat. Last year, Ontario Hydro forecast sales growth to average about 1.25% a year over the period of 1997 to 2000. That's roughly about half of the expected growth in Ontario's economy over the period. However, in developing last year's business plan, and I'll explain that in a second, they assumed that the low growth would be flat.

By "last year's business plan," what I mean is that Ontario Hydro has a business planning process, which basically goes through the fall of the year, where they make economic assumptions, growth assumptions etc, and all of the corporate costs and programs are based on those assumptions, as well as just the business they're in. In other words, it starts August, September, and then at the January board meeting the Ontario Hydro board of directors approves their business plan for that year. So back in September through December 1996 they went through the business planning process and in January 1997 their business plan was approved.

In spite of the flat revenue, in their last year's business plan the declining debt servicing costs and the reductions in operations, maintenance and administration costs that they were projecting would have meant that they would have been able to cover their capital expenditures and still pay down debt. In point of fact, they were looking at paying down debt in the order of about \$1.5 billion a year,



so they would have ended up at the end of 1999 at about a \$28-billion debt. Also in that plan, the average cost of power was projected to go down by about 5% over the period 1996-99. That's the context in which they have entered in 1997. As I indicated, the load is flat, very little movement, and their current assumptions related to their nuclear recovery plan will obviously change that picture for 1998.

**The Chair:** Just a question in that regard: Has there been any analysis to attribute that to the flatness? Is it involved with the issues of efficiency and increasing efficiencies? Is it involved with business decline? Is there any information that's been provided to the ministry to indicate why there's that differential of between 1% and 1.5%?

**Ms Farr:** There is information available within the ministry that I could provide to you. Unfortunately, I'm not the expert so I wouldn't be able to speak to it intelligently. But I can certainly take that back and have that information provided or have someone available if you wanted to ask questions.

**The Chair:** But at this point, as we speak, the assumption is still 1% to 1.5%?

**Ms Farr:** Yes.

**Mrs Johns:** In their financial statements in December 1996, Hydro wrote off \$2.5 million that we've already discussed here. Was that the first time Hydro had written off assets?

**Ms Farr:** Actually, it was \$2.5 billion. No, it isn't the first time. At the end of 1993 they had a very large write-down as well. I think it was in the order of \$3.5 billion, but that would have to be verified.

**Mrs Johns:** From the overall perspective, I'm interested in if in previous times the write-downs included nuclear assets. I'm interested in when was the first time we saw them beginning to recognize that their assets were not at the value they were book-valued at. Because really what's happening here as they're writing down their assets is that they're trying to match book value with actual value, I would assume. That's what you do when you take a write-off. You realize that your assets are overvalued. So I'd like to see from you, or maybe this is an Ontario Hydro question, I'm not sure, when write-offs happened in the past and if they were related to nuclear assets.

**Ms Farr:** Ontario Hydro would provide most of that information. I can speak to the fact that in 1993 Bruce unit 2, which was the first that I'm aware of, was written down at that point.

**Mrs Johns:** Can you tell me the process when Ontario Hydro decides that they want to write down an asset? What happens? I would imagine that accounting staff at Hydro says to the board and the board says to whomever, "We think we should do this." I'm really interested in governments being involved in the write-down. Does the government give approval for a write-down to come on the financial statement?

**Ms Farr:** Ontario Hydro would speak to their own internal process in terms of the write-downs. With respect to the role of the government, it is considered a business

decision, a fiduciary responsibility of the board to ensure that the assets continue to have value. So they would make the decision based on the advice and guidance of senior management about those. The government would not provide judgement on that.

**Mrs Johns:** So government has no say in whether the assets are matched properly. For example, if they decide after this year to leave these assets valued at I think it's about \$37 billion on the financial statement, we as a government cannot say, "The assets aren't worth that kind of value."

**Ms Farr:** The Ontario government leaves that responsibility to the Ontario Hydro board of directors.

**Mr Galt:** This question may be out of order but I'm curious what this would cost to produce, what has just been handed out.

**The Chair:** We'll ask Ontario Hydro that.

**Mr Galt:** I think we just found an example of our problem.

**The Chair:** Can I just suggest for the benefit of the committee that I'll notify Ontario Hydro that it would be helpful if they were to read the Hansard, for example, of this meeting.

**Mr Laughren:** They will.

**The Chair:** There are a number of questions that have been raised that I think would at least prepare them for some of the walk-through when we get back together again. That's obviously a question they would pick up on.

**Mr Laughren:** They've probably got the room taped.

1750

**Mrs Johns:** I have a process question about that and in fact I was asking the clerk about this previously. It's my understanding that unless this committee makes a recommendation, Hansard could take up to a week for us to see, and that of course will help no one. I understand that you can fast-track Hansard to get us priority somehow so that it comes more quickly. I would request that we do that of the Clerk's office or of Hansard so that we can see this on a more timely basis.

**The Chair:** I'm pleased that you've raised that. I was going to do that momentarily, just before we broke. I would ask if we have concurrence from all three caucuses that I make that request, that it's agreed?

**Mr Laughren:** Wait a minute. May I have your assurance that if you do this, it won't cost any money?

**Mrs Johns:** We're going to get Hansard some time anyway.

**Mr Laughren:** I'm just asking.

**The Chair:** What kind of assurances would you like, Mr Laughren.

**Mr Laughren:** I'd like assurances that if you ask for this to be fast-tracked, there will be no additional bill to the public sector.

**The Chair:** To the public sector?

**Mr Laughren:** In other words, it won't cost overtime and extra printing costs. Let's not cast aspersions at Hydro while we do something ourselves that costs more money.

**The Chair:** I can't give you that assurance. You understand that all we can do is ask.

**Mr Laughren:** Then I don't support it.

**The Chair:** Maybe you would support it if I phrase it another way.

**Mr Laughren:** I might.

**The Chair:** That Hansard be requested to expedite within the economic guidelines and goalposts.

**Mr Laughren:** If there's no additional cost.

**The Chair:** I'm in the hands of the committee.

**Mr O'Toole:** I support Floyd's sentiments.

**The Chair:** All right. That seems to picking up the sentiment.

**Mr Laughren:** I tapped into the mood of the committee.

**The Chair:** A very solid, conservative, fiscally prudent viewpoint and I'm so pleased to watch that epiphany unfold.

Are there are any other questions at this point?

**Mr O'Toole:** Just more or less my concluding statement or question on the corporate entanglements, and I'm just sort of saying it for the greater good of the greater group here. When I'm reading the other operating highlights, I'm interested to have someone explain to me — Ontario Hydro set up Ontario Hydro Interconnected Markets Inc. This permitted Ontario Hydro to sell to the US market. This is the interesting challenge. Export sales to the US currently reduce the cost for Ontario customers. I suggest to you that they could not possibly sell at cost. That's subsidized. It's short-term operating revenue to drive the real cost down and it's all debt deferment. From a very novice accountant, like Commerce 101, that's price stabilization, to keep the price flat, by utilizing assets that aren't properly being discharged. I hope Maurice comes in because some of the things here I don't think are appropriate business practices. I'm serious. That worries me.

**The Chair:** Again, that may be a query that's particularly directed to Ontario Hydro.

**Mr Kwinter:** This question I'm going to present to Hydro as well, but you might give me your version of why you think it happened. I notice that in their financial results they had projected that the net income for 1997 would be \$740 million. They've now lowered that projection and they expect it's going to be \$165 million for 1997. That's a pretty dramatic change in expected revenue and that doesn't take into account the \$3.5 billion which could arise as part of the nuclear recovery strategy. Do you have a view as to why there was that dramatic reduction in revenues?

**Ms Farr:** I think you're absolutely correct that Ontario Hydro will be able to address it more effectively and in detail. My general understanding is that a lot of that has to do with lower production from the nuclear facilities up until the end of September of this year. When you don't have the nuclear facilities available to you at the lower operating cost, then you must replace it with more expensive generation. That has added costs and therefore lowered their net income projection. But as I said, more

detailed explanation will be provided by Ontario Hydro, I'm sure.

**Mr Kwinter:** What about export sales? Have those been down?

**Ms Farr:** I can't recall, sorry.

**Ms Farr:** If I could just add one thing to the question that Mrs Johns asked a little earlier about the responsibility of Ontario Hydro's board in dealing with making decisions on write-downs and things like that, I want to mention that the Ministry of Finance does approve the borrowings of the corporation, and if they felt that Ontario Hydro was not fiscally responsible, they obviously would not approve those borrowings.

**Mrs Johns:** Does the Ministry of Finance have the knowledge, for example, to know the market value of the assets of Ontario Hydro versus the book value? Do we have enough knowledge in the bureaucracy to be able to make those assessments?

**Ms Farr:** I can't answer that specifically. I can just find that out for you. I assume so but I'm not speaking in full knowledge.

**The Chair:** We'll end the questioning there. The committee will stand down for one hour. It will return at 7 o'clock; dinner for the committee and the consultants in the dining room.

Depending on how the questioning goes upon our return, I would propose that we might be able to find about a half an hour towards the end of the evening to spend in quiet session with our consultants; that is, if we are able to conclude this part of it. If not, then we'll have to carry on tomorrow.

*The committee recessed from 1757 to 1903.*

**The Chair:** The committee will be in session, please.

**Mr Laughren:** Mr Chairman, I wonder if in the interest of expediting the work of the committee, I could move a motion, assuming I could elicit one piece of information from Ms Farr on the Macdonald commission report. I didn't know whether you were prepared to talk about it this evening or not?

**Ms Farr:** No, I did not come prepared to talk to that item.

**Mr Laughren:** Okay. That's fine. Then I would put the motion as follows. I don't know how long Ms Farr intends to take this evening, silver-tongued devil that she is, and I don't want to pre-empt her presentation, but I was hoping that this evening we could finish this part of the Ministry of Environment and Energy's presentation to the committee, and then tomorrow, for the first half-hour, deal with a closed session of the committee with our consultants, from 3:30 to 4; and then from 4 to 5, because we must adjourn at 5 tomorrow, deal with the presentation on the Macdonald commission recommendations. I'll put that in the form of a motion.

**The Chair:** We'll take that as a form of a motion. Any discussion? Does the committee agree to that? All in favour? Opposed? Carried. Thank you. Then that's so ordered for tomorrow. We'll complete this part of the business tonight. Whatever time that concludes, if it's earlier than 9, we'll conclude and retire for the night.



Tomorrow, we'll begin at 3:30. From 3:30 to 4 approximately, at the determination of the Chair, we will meet in closed session with our consultants. Then from 4 o'clock to 5 o'clock, we will return once again to the ministry and deal with the Macdonald report.

Let's carry on, please. Ms Farr, we're in your hands.

**Ms Farr:** I have two remaining sections that I would like to speak to: One is the Ontario Energy Board Act and the other is the Atomic Energy Control Act. Then Mr Savage will speak to the municipal utilities.

With respect to the Ontario Energy Board Act, it is section 37 of that act that requires Ontario Hydro to submit a proposal to the Minister of Environment and Energy whenever they wish to make a change in the rates or charges to customers. The minister must refer the proposal to the OEB for review at a public hearing. The OEB reviews that proposal by Ontario Hydro. It does convene a hearing so that intervenors are allowed to query the submission and then it must report back at least four months before the proposed effective date of the rate change.

Once the Ontario Energy Board has the submission from Ontario Hydro, they develop what they call an issues list, and that is basically those issues that the hearing will address. They negotiate whatever will be excluded from the hearing. It's based on that issues list that the hearing is convened, and intervenors are allowed to query those things that are within that set of issues that has been agreed upon.

The hearings portion takes roughly about three weeks to a month. The arguments are heard from Ontario Hydro, from the counsel for the Ontario Energy Board staff and also from the intervenors. Based on that information, the hearing information and the issues list, the Ontario Energy Board prepares its report. Typically, in a normal process it would report back around about the end of August for a rate increase that typically — Ontario Hydro asks for rate increases at the beginning of the year.

Those recommendations are generally directed to Ontario Hydro. On occasion they will make a recommendation and direct it specifically to the minister. However, Ontario Hydro does have the final rate-making authority. It is through their board of directors that they make a final decision on the rate level for the next year, and then they let the customers know 60 days in advance of the rate change.

**The Chair:** I'm sorry. Are you just pausing for a moment?

**Ms Farr:** I just wanted to give you a little bit of a history in terms of what the rate increases were and then I'm finished.

**The Chair:** Please carry on.

**Ms Farr:** The rate increase levels: For 1991, they proposed 7.8% and 8.6% was the decision on it.

**Mrs Johns:** Boy. My God.

**Mr Laughren:** You pointed to me?

**The Chair:** All right. That's a question being put to the committee. We'll be very clear that no fingers are being pointed at this time.

**Ms Farr:** The proposal for 1992 was 8.9%; the rate increase implemented was 11.8%. The proposal for 1993 was 8.6% and the rate implemented was 7.9%. Since then, the rate increase levels have been zero, as in no change.

**Mrs Johns:** Under a Conservative government.

**Ms Farr:** Starting in 1994.

**The Chair:** And has been maintained for 1995, 1996 and 1997.

**Ms Farr:** That is correct, and I am finished.

1910

**Mr Kwinter:** I just want to go through the process again. My experience as a minister dealing with beer was that the breweries would make their case to the LCBO and the LCBO would have to get cabinet approval to increase the price of beer. It was a very political issue, I can tell you. Before an election, the price of beer did not go up. After an election, it usually did. The question I'm asking is that when I see in the material here that it's advice only to the minister and to Hydro, I think you said that it goes to the minister but the Hydro board has the final authority as to what the rate is going to be.

**Ms Farr:** That's correct.

**Mr Kwinter:** And the minister cannot overrule the Hydro board on the rate?

**Ms Farr:** No, the minister's responsibility is to forward Hydro's rate proposal to the Ontario Energy Board. The Ontario Energy Board makes its recommendations, but the decision is that of the Ontario Hydro board of directors.

**Mr Kwinter:** Then the cabinet does not have control.

**Ms Farr:** The cabinet is not involved in the rate decision.

**Mr Kwinter:** It's not involved in the setting of rates.

**Mr Galt:** I may have missed it, but who sits on the Ontario Energy Board? How is it composed?

**Ms Farr:** They are appointed by the LGIC. There must be at least five members, including a chair and a vice-chair. There are normally about eight full-time members and three or four part-time members, and they are typically appointed for about three-year terms.

In terms of the hearing or the process for the Ontario Hydro rate submission, typically three of the members actually sit on the panel to hear Ontario Hydro's specific rate review. They will have a chair and two other board members who will hear the rate submission and listen to the intervenors. There is counsel for both sides — Ontario Hydro and the Ontario Energy Board staff — and then there is also counsel for the intervenors who question the various witnesses etc.

**Mr Galt:** How many of these are paid employees?

**Ms Farr:** The board members?

**Mr Galt:** Yes.

**Ms Farr:** The board members are appointed by the LGIC. I'm not sure how their remuneration works.

**Mr Galt:** But are they occasionally or sometimes or regularly staff of Ontario Hydro?

**Ms Farr:** No. The Ontario Energy Board has no Ontario Hydro staff. They are separate and distinct entities.

**Mrs Fisher:** The follow-up to that might be that we might be well advised to ask — again, it's a commission — for the excerpt from the agencies, boards and commissions book. It will tell us how long and who and how much.

I have two short questions. Has there been any discussion that you know of — I don't really care how far back you go, 10 years or 20 years — as to whether the OEB findings should be binding as opposed to only recommendations to Ontario Hydro? I'll repeat that: Has there been any discussion that you know of at the ministry and recommendations to the minister in the past 10 years, 20 years, that the findings of the Ontario Energy Board rate hearings be binding as opposed to only recommendations to the board of directors of Ontario Hydro?

**Ms Farr:** As it currently exists within the Ontario Energy Board Act, they are only advice and guidance to the Hydro board of directors and to the minister. Certainly there have been views, whether they be of intervenors etc, that there might be a different way to deal with this, but to my awareness there has been no critical discussion to say that it must be the case.

**Mrs Fisher:** Has the ministry, that you know of, ever done a review of how many of the recommendations made by the OEB to Hydro have been accepted and, further, passed as a motion of their board of directors and acted upon that way?

**Ms Farr:** Ontario Hydro, as I recall, has in the past provided a follow-up document to the minister that says, "These particular recommendations have been accepted, these have been rejected," and with reasons. In the past when there were rate increase levels there has been such a document prepared by Ontario Hydro that has been the subject of a little bit of discussion at the beginning of the next year's hearing.

**Mrs Fisher:** I think it might be handy to have made available to us — I don't know really how far back to go on this request, and I'm open to any idea here, but the request I'm thinking about is, what in fact have the OEB hearings cost us in the past and are there usually hearings on an annual basis even when there is not a rate increase? If you recall, the last one was an application for no rate increase, a zero per cent increase, but it did result in an action being taken to adjust the formula for rates. I wonder if we could get some idea, some accounting of the cost, if somebody could come up with a number — it's not a hard thing to do, I don't think — to Ontario Hydro, because they pay the intervenor status funding. I wonder if we could get the cost of that to Ontario Hydro for each of those years, whatever year we go back to.

**Mr Lewis Yeager:** Just the intervenor funding?

**Mrs Fisher:** The cost of the hearing process in total.

**The Chair:** All right, we'll have legislative research look at that.

**Mrs Fisher:** May I add to that a little bit? At each of those hearings, there's a reason why you have intervenors and it's not often because they fully support everything that's happening. I'm not looking for any type of great big library of anything there, but if they could just show us the

intervenor list and what their interest was, and then the cost of the hearings for that year.

**The Chair:** Okay.

**Mr Laughren:** Following up on what Mr Kwinter said about beer prices, even though the Ontario Energy Board sends the recommendation back to Ontario Hydro, I think you would be hard-pressed — if ever you could get them to admit it is another question, but I don't think there has ever been a rate increase or a flat line that's gone back to Hydro that hasn't been approved by the Premier of the day. I just think that's one of the givens of political life in this province, and that's more or less what Monte is saying.

**Mrs Johns:** You mean you approved that 8.6% and 11.8% and 7.9%?

**Mr Laughren:** I'm really glad you asked that question. When did the cost of Darlington, the outrageous cost that the Tories triggered with the launching of Darlington, when did those construction costs start getting plugged into the rate increases?

**Ms Farr:** It is a question that I think you need to have Ontario Hydro verify, but it was definitely around the late 1980s, the beginning of the 1990s.

**Mr Laughren:** That's correct. That needs to be understood.

**Mrs Johns:** We're not paying for Darlington now.

**Mr Laughren:** Let me finish my point, please. You were the one who started the cheap shots, so let me finish. When Darlington was built, as with all other construction projects, the costs of those projects were not computed into the rates until they started delivering power to the ratepayers of the province, am I right?

**Ms Farr:** That's correct.

**Mr Laughren:** So when Darlington went out of control, from \$3 billion to \$4 billion up to \$14 billion, guess when those rates had to be computed into the rate increases? That's when it happened. That's why the increases went up so fast. So, Ms Johns, before you start pointing fingers, maybe you better understand what it was that triggered those rate increases.

**Mrs Johns:** I understand totally.

**The Chair:** We'll carry on with the questioning. If the consultants have any additional information in that regard, they can provide it for the committee within the next 24 hours. That would be helpful as well. Mr Laughren, do you want to ask any other questions?

**Mr Laughren:** No.

**Mrs Johns:** I was interested in what you said because somehow it doesn't compute for me. I just wanted to ask this question: How could the Conservatives, in the Common Sense Revolution, promise a rate freeze if they had no control over the ability to be able to guarantee a rate freeze?

**Ms Farr:** I believe what I said was that Ontario Hydro has the final decision-making authority with respect to the rates. However, obviously they would be aware of and certainly understand that the government has an energy priority, which is a rate freeze to the end, I think, of the year 2000, and would take that into account in their



deliberations as they consider the final rate increase level. So while they make a decision on the rates, they obviously take not only the Ontario Energy Board recommendations into account but also the energy policy of the day.

1920

**Mrs Johns:** So, because all of these facilities are amortized over approximately 40 years, as I understand it, for example, Darlington would still be adding costs over the next 40 years, starting in 1990. From that perspective, if we had followed through on the same logic, that that adds costs, then it would have added costs for the next 40 years.

**Ms Farr:** I'm not sure what you mean by adding costs. What happens in the construction of a facility is that the capital costs of that facility are basically capitalized, that is, they're not put on the books until such time as power is being produced, and then that cost is depreciated over the lifetime, which is a 40-year lifetime, presumably, of this facility.

**Mrs Johns:** So Mr Laughren's point that Darlington affected them for three years and really doesn't affect us would not really be valid, because that Darlington cost is being amortized over 40 years.

**Mr Kwinter:** I seem to be missing something in this. Understand that I'm not really asking you to defend it, but I would like to get some clarification somewhere along the line. If the Ontario Energy Board has hearings, all they can do is advise Hydro. Regardless of what the perception is, I can tell you that a rate increase does not go into effect in Ontario without the government of the day approving it. That's just a fact of life. It seems to me that there's a useless exercise here of window dressing. Why go through this whole expense and process when Hydro can say, "Here's what we need," and the government says yes or no and, "This is the rate." I just don't understand why we're going through this process. I take the suggestion, but what is the cost of going through this and what is the efficacy of doing it?

I've had a peripheral involvement with Hydro, and over the years I know we've had the CEO of Hydro come and brief cabinet on a regular basis as to what's happening in Hydro. As I say, I think you're naïve if you think these rates are set without government approval. Somewhere along the line, I don't understand why we go through this process. I don't know whether you can answer it or somebody can answer it.

**Mrs Fisher:** I would just like to add to that. It's the same frustration I've thought about — experienced, is really the fact — because nothing is binding. That raises a question this committee needs to get serious about, in terms of our recommendations when we go forward, as to whether or not the findings of OEB related to Hydro rates are binding or not, as opposed to those of gas, which are. So there's a value in the end in terms of being able to establish some credibility to the committee and then enact it. It doesn't make any sense to me — it never has, by the way — so here's our opportunity, I guess, to open the door for discussion there. But that's exactly what happens: They hear; they recommend.

I would like to see the record. Pick a number — again, I don't know if we established a year there — 10 years back. This isn't picking on anybody; it's just to put a picture in front of us as to the seriousness of the problem, the cost attached, the number of recommendations that were made and those that in fact were accepted. Then if you take a look at the intervenor list and you compare it against the costs and you see the things that weren't done that were recommended, I agree with you: You wonder whether or not it's a ridiculous procedure, as opposed to just window dressing, because it's costing, and all that adds up.

**Mr Laughren:** I must say I'm getting somewhat agitated here, because it seems to me — and I agree with Mr Kwinter that at the end of the day the government will tacitly approve the rates — the government of the day, if they've got anything upstairs, will take a look at an independent assessment of that rate increase request, because I don't think — and I don't want to take any cheap shots at Hydro — any government of the day wants to just take Hydro's word as to what rate increases they need. Go back to Darcy McKeough's day when he took them on and said no and rolled back the request for capital expenditures and so forth. It seems to me that's the role the Ontario Energy Board plays, to provide an independent — and they are independent — assessment of Hydro's request for a rate increase. For that reason, I think it's a worthwhile exercise. I'm not quarrelling with your request for information; that's fair.

The other point, and I'm not going to let Mrs Johns turn my mind to glue here this evening: Surely to goodness, if you get a 10% rate increase because of Darlington coming on stream, that's built into the new rates, so why would you have to add it in future years? It's already there in the rates. I don't understand at all her argument that in future years you didn't have to consider the cost of Darlington. Of course you have to, because that's already built into that new increased rate that was approved back in the early 1990s.

**Mrs Johns:** Which year? Is it 1991, 1992 or 1993?

**Mr Laughren:** All those years. It was three years. I think it was about a 10%-a-year increase in rates. That was very substantial, because \$14 billion is a huge amount of capital to start building into the system for the rate-payers to pay for. They had to do it. What are you suggesting? That the debt of Hydro should have gone even higher? I don't think so. I think you had to do that. I think the power act says you have to do that as well. Tell me if I'm wrong. Ms Farr, but it seems to me that was the reason why rates went up the way they did when Darlington came on stream, and those rates are still there.

**Ms Farr:** Let me just clarify that at the point in time that Darlington did come into service, the rate increases reflected the costs of Darlington coming into service as those costs were brought into the rate base. Once they're brought into the rate base, you're absolutely right: They continue to be part of the rate base. That's correct.

**Mr O'Toole:** I'm unfortunately maybe not keeping up. I just want to go back to the rate freeze and the ability of

any government to forecast that with any degree of ability to control policy. Wasn't that a widely understood dilemma that Hydro and the Ontario Energy Board and the rest found themselves in? When they looked at the market and the deregulation of the market, they understood that they were already overpriced. They were carrying far too much debt to be competitive. They understood that even before Macdonald entered the game. Certainly the board and the accountants did. In fact, if you look at the industrial restructuring comment you put in here in two lines, it said that Ontario Hydro notes that it's carrying too much debt to operate in a fully competitive electric market. That's where we are.

I'm trying to get back to this. If you've got this huge problem and the only way is to defer it on to the rate base somehow and you're not competitive now, no wonder everyone wants to deregulate. They're bailing out. Hydro certainly knew that.

Were there occasions — this is a question I would ask of them — where they had excess capacity and should have sold it to defer some of the losses for capacity? Overcapacitization was the issue. They didn't need the other plant. They had this excess capacity not properly managed and basically costing them money, depreciating in value the older it got. They should have pumped out the power and sold it to anybody who wanted it. Was that ever a problem in your mind, where they said, "One of our initiatives here will be exporting power"? They should have got right into that market.

**The Chair:** Mr O'Toole, can I just break in for a moment? Is that a question that is even more directly posited with Ontario Hydro?

**Mr O'Toole:** It has to do with the rate freeze. I'll come back to that and say that as a government or as anybody involved in the industry on an ongoing basis — and I would probably put it to either Richard or one of the experts — in the background, they must have had these arguments internally, saying, "Would we be better off to sell six cents of power at four cents and only lose two cents?" They must have had those discussions. Now they're going to end up with stranded assets, which is an even worse problem.

**The Chair:** All right, Richard, will you come up to the table. We'll see if we can dispense with this question, and then we'll move on.

1930

**Mr Campbell:** Thank you, Mr Chairman and members of the committee. Going back 10 years, Ontario Hydro had a plan to build many, many new nuclear reactors and generating stations on the demand-supply plan. At the end of the last decade that plan was going forward with an environmental assessment, but there was quite a paradigm shift around the beginning of this decade, the 1990s, brought about in part by the rate shocks of 1991, 1992 and 1993, where load started to flatten and industrial customers and residential customers reacted to the high rates, and the prospects of deregulation all of a sudden appeared on the horizon.

All that happened at the same time that the Ontario Energy Board Act and the Power Corporation Act were still in force. They're still in force today. The Hydro board has a requirement that includes a provision for net income recovery. Their hands are pretty much tied. They look at the numbers. They decide on a rate increase. Certainly in the early 1990s the impact of Darlington was a major component of the impact of the rate increases.

All of a sudden a vision of the future that included significant power shortages became a vision of the future that saw significant power surplus, and that is exactly what happened. Load did not grow. In fact, it contracted. It has been flat ever since, and as a result Ontario Hydro has to deal with surplus assets. It did so in the early part of this decade by declaring certain parts of its plant surplus and mothballing them. Also now, as you're aware, they are doing the same with nuclear plants for certain reasons which include economics. So they're reacting to the marketplace in that way.

**Mr O'Toole:** But how does the rate freeze quantify into it? Was that ever discussed, like saying to be competitive, or you've got to kind of cap the cost here and sort of say all this is paid for ultimately by the end user, and to be reasonable and whatever? That's got to have been around for more than just the Macdonald report in this short era.

**Mr Campbell:** I'll just have to say that the regulated public utility has been the model that's been around for 100 years in this province. Those are the rules by which all the players have been playing the game. It's the prospect of those rules changing dramatically that has given Hydro and other members of the industry the reason to start to prepare for competition. When you are a public board that can set a rate to recover costs you do that. As Mr Laughren has pointed out, in the early 1990s, faced with the impact of costs of a major new plant coming in on stream, you recover those costs. That model has to change because under the current rules Ontario Hydro and other public utilities cannot compete in a North American market.

**Mr Galt:** On a point of order, Mr Chair: If I may, the last 20 to 25 minutes we've been off topic. We've been into the solution, the problem and then the solution. I'd really plead with you that we get back on topic. The original intent was a briefing to understand how Ontario Hydro works; more specifically, an overview of Ontario Hydro functions, the Power Corporation Act and the background of the Macdonald committee. If we can stick to that, maybe we can get this completed in a reasonable length of time and when it's in order we can start questioning Ontario Hydro and other expert witnesses. But we're really spinning our wheels. We're not going anywhere.

**The Chair:** I appreciate your comments. I have made two interventions, and members have insisted on walking down certain paths. I hope that tonight we'll have a chance to reflect upon that and keep ourselves focused on the witnesses who are before us to get the very best of their expertise. Point taken.



**Mr Kwinter:** Mr Chairman, I want to respond to Mr O'Toole. One of the problems with Hydro is that you don't build a generating capacity overnight. There are huge, long lead times, very expensive and very long times to do it. I can just tell you that in 1989, when I was the Minister of Industry, Trade and Technology, the major power users came to see me because they were concerned that they were going to be facing brownouts. They really felt that we did not have enough capacity, and we had to go out and negotiate deals with Manitoba so that we could have sufficient power to meet the expected needs. Then suddenly it just flipped, and that's just something that obviously, no matter what kind of modelling you do, you don't necessarily anticipate. I think that's one of the concerns we have and that's what we just heard about.

**The Chair:** Okay. I think we have now exhausted that area. Let's now bring ourselves back into some focus. Ms Farr, we're in your hands again.

**Ms Farr:** The last piece I would like to address is the Atomic Energy Control Board and their act, which is called the Atomic Energy Control Act. It is just in the process of changing. The federal Parliament just recently passed the Nuclear Safety and Control Act and the federal government is in the process of drafting regulations with that act that will change the act somewhat to increase the definition of the safety and control that the AECB has with respect to nuclear facilities.

**The Chair:** Are you suggesting, Ms Farr, that they are increasing the security levels, the standards and so forth?

**Ms Farr:** I'm suggesting that they are better at articulating what safety and control mechanisms are associated with nuclear facilities. The existing act is actually quite small and not very well defined, and the new Nuclear Safety and Control Act is an effort to more specifically identify those responsibilities of the Atomic Energy Control Board.

**The Chair:** Are you suggesting that the act to this point has been unclear in a number of specific areas, or has been silent, or ambiguous?

**Ms Farr:** I'm saying that the previous act did not specify as clearly as the AECB would like, and that is why they've enacted the new legislation. That being said, they have in an operational sense put in place the controls and mechanisms they feel are appropriate related to nuclear facilities.

**The Chair:** I have to pursue this because this is absolutely germane to the kind of issue we're talking about, that Mr Galt is pleading with us to be focused on, that if we begin to ask one of the questions of what went wrong, behind that may very well rest the questions of definitions by Atomic Energy and so forth. The question I put to you before included words such as "silent" or "ambiguous" or "contradictory," and you have been very circumspect in your response to my question. I appreciate that, but as a layman I want to push the envelope just a little bit more in this regard. In your mind, from the ministry's point of view, were the guidelines issued by Atomic Energy precise enough, clear enough, unambig-

uous enough to ensure that there was no operational confusion?

**Ms Farr:** That is a question I really cannot answer, Mr Chairman. Ontario Hydro is the one that has the daily conversations, the "must live up to the licenses" that the AECB puts forward to them, and they would indicate to you, and I suspect that you're best to ask Dr Bishop, if you're seeing Dr Bishop, with respect to how they have moved from the old AEC act to the new Nuclear Safety and Control Act.

**The Chair:** Or more appropriately to ask the question of the federal government, their representative, and that federal government representative is here.

**Ms Farr:** Yes, that's Dr Bishop.

**The Chair:** My final question to you, then, from the ministry's point of view is: Is it your understanding that in the ministry there has been a very clear understanding of guidelines, that from the ministry's point of view the ministry staff have understood the guidelines, have understood the control and safety mechanisms outlined by the Atomic Energy Control Board?

**Ms Farr:** It's not our responsibility to understand all the individual instructions as they relate to the licence for the nuclear facilities. That is the responsibility of Ontario Hydro as the licensee.

**The Chair:** I understand your answer.

**Ms Farr:** As the ministry we understand that nuclear safety and control are the responsibility of the Atomic Energy Control Board and we understand where they are responsible as opposed to where we are responsible.

**The Chair:** In final point, then, flowing from that, in your mind, representing the ministry, is there any linkage between controls and standards and environmental impacts?

**Ms Farr:** I'm afraid I don't understand that question, Mr Chairman.

**The Chair:** All right. I'll rephrase that with another ministry. Other questions?

**1940**

**Mrs Fisher:** I just have one. During this review period of AECB, have they requested any input from the province, seeing as they are tied together in a certain way? Obviously, the licensor is AECB, the operator Ontario Hydro, but in the end we have the responsibility for those things that happen. Has there been any request by the AECB of the province for input into potential changes to the way in which the AECB will operate? Has the federal government approached the provincial government asking us for any type of input?

**Ms Farr:** The licence is between the licensee and the licensor, so we are not involved in the development of the licence to Ontario Hydro or how Ontario Hydro meets the requirements of that licence.

In terms of the Nuclear Safety and Control Act, the federal government is obviously interested in any provincial input as they develop their draft regulations and have asked if there are specific areas where we have interests. That is part of their responsibility, to make sure that our interests are also solicited.

**Mrs Fisher:** So they have approached us for input that way?

**Ms Farr:** Yes, they have.

**Mrs Fisher:** Have we provided any?

**Ms Farr:** The process will take us through until September 1998, so we haven't had a lot of opportunity to review even draft regulations at this point in time, but we will make our input to those.

**The Chair:** Are there any other questions? Okay, we're in your hands, Ms Farr.

**Ms Farr:** Just to quickly go through the powers, they have broad powers of regulation in the development, application and use of nuclear energy. What they do is ensure that the use of nuclear energy does not pose an undue risk to health, safety, security and the environment.

They have a comprehensive licensing system that covers all aspects of the nuclear facilities, prescribed substances and equipment, including certification of domestic and foreign export transport packages. There are some 4,000 licences currently in effect.

The licensing system is administered so that the concerns and responsibilities of the federal and provincial governments in the areas of health, environment, transport and labour are taken into account. They also extend to the control of import and export of prescribed substances, as well as compliance with requirements of the treaty of non-proliferation of nuclear weapons.

The AECB board is a five-member board. One member, the president of the National Research Council, is automatically appointed by provision of the AEC act. He or she is an ex-officio member. Four members are appointed by a governor-in-council appointment, a federal appointment. One of them is appointed as president. The current president is Dr Agnes Bishop. There are approximately 400 officers and staff employed for the purpose of carrying out the work of the board.

**Mr Galt:** What was that number again?

**Ms Farr:** Four hundred staff.

Of the five board members, only one, the president, is a full-time member. The others are part-time. It's a quasi-judicial, decision-making body making decisions on health, safety, security and environmental issues for the nuclear industry. They meet approximately nine times a year.

AECB staff have the responsibility of implementing the policies of the board and making recommendations to the board concerning issuing of licences and other regulatory matters. The majority of the 400 staff I referred to are based in the board's headquarters in Ottawa. However, there are inspectors at all nuclear generating facilities, including those of Ontario Hydro.

There are three types of licences issued by the AECB. One is called a facilities licence. They also have nuclear material licences and import-export licences. The one you would be most interested in likely is the nuclear facility licence, which includes nuclear reactors.

Before the AECB issues a licence to operate a facility, the applicant must meet specified criteria for siting, construction and operating. That would mean they would have

to meet criteria for the siting initially, then for the construction, and then they would have an operating licence. All of Ontario Hydro's nuclear generating stations have nuclear operating licences at this particular point in time.

The AECB process also provides for public input. What happens is, all of the AECB board meetings are open public meetings and the public are invited to attend. The materials for the board meetings are distributed two weeks in advance of a board meeting. For example, there is an AECB board meeting on October 9. Those materials would have been made public late last week, and the board will review them at their meeting on October 9.

There is also an opportunity for input in the licence decision-making process through this particular venue. When licences come up for renewal, as do Ontario Hydro's, they are part of that public process. There is what's called an initial consideration of the licence where intervenors can make their submissions and speak to their submissions. Then, at a subsequent time prior to the expiry of the existing licence, there will be a final consideration by the board of the utility's licence.

The AECB board staff are responsible for making their submissions to the board as well, so they would make a submission on a particular licence renewal, whether it be Bruce A or Pickering A, and advise the board of their particular recommendations on issuing a licence for that facility. All of these submissions to the board are written submissions. They do speak to them when they get there, but they are required to provide written submissions in advance.

The AECB board also does a certain amount of off-site hearings where they may travel to a community in order to hold some of their hearings. For example, last November the AECB travelled to the Durham region and one of the agenda items was the renewal of the Pickering licence.

The AECB board grants a licence renewal when they're satisfied that all the essential safety issues have been adequately addressed by the proponent. However, even after a licence has been issued, the AECB can for safety reasons impose restrictions on the operations, anything from derating the output of a unit to a complete station shutdown if they feel that is warranted.

**Mr Kwinter:** The AECB grants three different types of licences: facilities, nuclear materials and import-export licences. Do they just license processes and facilities? What about people? Do they have responsibility for licensing people or do they just expect that the licensee will provide the necessary skills to carry out their particular requirements?

**Ms Farr:** The AECB address a whole range of different areas. For example, they approve key station positions like the operations manager, the shift supervisor, the authorized nuclear operator etc, so for certain key positions they are part of the approval process. They also approve emergency procedures, the maintenance standards, minimum shift complements. They are involved in approving those particular items as well.

**Mrs Johns:** Does the atomic energy board have any ability to decide on how many nuclear reactors there are in



a province, versus in Canada, for example? Could they say, for example, "No, I think we have too much nuclear in the province now"?"

**Ms Farr:** They're concerned with the safety and control of the nuclear reactors. They're not concerned about: Are there three? Are there five? If the proponent meets the criteria that are specified, they would grant a licence.

1950

**Mrs Johns:** I'm not sure exactly how this happened, and I just want to clarify this. The atomic energy board had some concerns about Pickering and therefore granted a shorter-term lease than was normally granted in the past.

**Ms Farr:** Correct.

**Mrs Johns:** So we know they must have had some concerns about Pickering. Do we know if they had concerns, because they have inspectors in all the plants, about Bruce and Darlington?

**Ms Farr:** The AECB staff recommendations are a matter of public record. Each time a facility comes up for a licence renewal, the AECB staff would identify any issues and would make their recommendation not only in terms of those issues but also in terms of the length of the licence that they would recommend to their board. So if they had any issues, they would be a matter of public record.

What they were saying with respect to the Pickering A plant was that they were comfortable with a shorter licence period, given the issues they had identified with Pickering.

**Mrs Johns:** Has the government received back from the atomic energy board the report that was asked for by the minister with respect to their assessment of the Andognini report?

**Ms Farr:** The AECB staff have just recently completed their preliminary review, and that will be tabled with the committee. It's just recently been made available. It will be the subject of discussion at the October 9 AECB meeting as well, and it will be made available to this committee.

**Mr Laughren:** Following up on Mrs Johns's question, I'm interested in the tabling of that report. You don't know exactly when it's going to be tabled with the committee?

**Ms Farr:** As soon as we can get it out the door.

**Mr Laughren:** But do you have it yet?

**Ms Farr:** Yes, and I understand it will be tabled tomorrow.

**Mr Laughren:** Okay, great.

**The Chair:** No other questions?

**Mr Laughren:** One, and it ties in with what Mrs Johns was asking. I know that when a licence review is up or they go to AECB for review, they can do all sorts of things then. What about in interim periods? Say it's Pickering that's up for renewal. What if in the meantime there are problems at Darlington or Bruce? Will the AECB take the initiative at that point and call in Hydro and say, "Look, we know that you're not up for review for another six months or a year, but we've got some

problems and we're going to deal with them now"? Do you know that?

**Ms Farr:** I expect that you'll have lots of questions for the AECB representatives but, yes, they do have the ability to speak to the licensee at any particular point in time to deal with issues, and they also have the ability between licences to derate a station or take whatever measures are necessary in order to ensure safety and control.

**The Chair:** As we conclude, I'm just a little puzzled with one piece of information, Ms Farr. Maybe you can help me understand it. Clearly, according to your testimony, before a site is licensed, it has to meet a range of criteria.

**Ms Farr:** That's correct.

**The Chair:** It is then licensed. It is then assumed at that point that the federal authority is satisfied that the issues such as safety and operating competencies are met. Am I right so far?

**Ms Farr:** Yes.

**The Chair:** At the same time, the federal authority places inspectors on site.

**Ms Farr:** Yes.

**The Chair:** Those inspectors are competent, capable?

**Mr Laughren:** Say no.

**Ms Farr:** I can't speak to that.

**The Chair:** Mr Laughren may be going after different fish than I am. I assume they are competent.

**Ms Farr:** I assume they are too.

**The Chair:** Do they have the authority to intervene in the operation of that site if for any reason they believe issues of safety, health and so forth are being compromised?

**Ms Farr:** Again, this is something I think you should explore more fully with the AECB.

**The Chair:** I understand, but from the environmental point of view, your ministry —

**Ms Farr:** From my understanding of it, these are site managers who are responsible on behalf of the AECB for the safety and security of that facility, and if there were an incident that would be flagged to them that required an action, they are fully authorized by the AECB to do so.

**The Chair:** If I start from the assumption that at the beginning of the operation the plant meets all the standards, the operators meet all the standards, everybody is competent, everything is safe, and I have onsite supervision and ongoing inspection by the federal regulators, how does it happen that there is a degradation of those standards from the time a licence is first issued until it becomes time for renewal?

**Ms Farr:** The AECB staff on site are responsible for ensuring minimum standards, and I'm choosing my words here, the expected standards that are appropriate in their responsibility for safety and control. As long as the licensee meets that standard, they are acceptable to the AECB and they continue to have their licence. The fact that there may be problems identified or a ratcheting down of a particular safety standard or whatever is the responsibility of the licensee. As long as it meets the

requirements of the AECB, they are allowed to operate. Ontario Hydro, as I understand it, operates to a standard of nuclear excellence. They may not be excellent, but they are certainly within the fully acceptable standards for safe and reliable control of those facilities.

**The Chair:** So what you're saying to me is that 50% is a passing grade. You may self-impose a standard of 90%, but the person who's doing the grading, AECB, is only interested in that 50% goal mark. They may make comments, and more editorial than anything else, but it's the 50% you must reach to be able to get your licence. Is that correct?

**Ms Farr:** I wouldn't use numbers like that. I'm just saying that as long as it meets their safety criteria, the AECB is satisfied.

**The Chair:** I apologize to you. I did give you fair warning earlier today I come from that strange background that has to put these things into some kind of understandable context.

Let me come at this another way. Do the standards change?

**Ms Farr:** That's something —

**Ms Brandon:** Mr Chair, may I suggest with all due respect that I think the ministry has sort of gone as far as they can go on their information on the AECB and —

**The Chair:** I understand that, and I said I was conscious of that when I began, but I was concerned because of the environmental aspect. The last time I heard, the ministry had the word "environment" in its name, and I have a concern about that. That's fair enough. I'll come back and pick this up with another group. That's fine.

**Mr Kwinter:** I'll want to ask the board, but just to follow up on the Chairman's comments, the classifications of the facilities virtually throughout Ontario are "minimally acceptable," according to the report we have. I understand there are four grades: There's excellent, there's good, there's minimally acceptable, and I guess there's unacceptable.

The question I ask is, when you have a brand-new facility, does the Atomic Energy Control Board say, "You cannot open until you are" excellent, good or minimally acceptable? Do you know that?

**Ms Farr:** I'd just like to differentiate. My understanding is that those particular grades are associated with nuclear industry standards that Mr Andognini and his group have adopted as the measures to look at. They would more appropriately address that. The AECB will look at its criteria and measure the facility against the established criteria it has for safety and control. I'm sure the AECB will speak specifically to what their criteria are with you.

2000

**Mr O'Toole:** This might be a bit superfluous, but is there any kind of number that's used by the ministry for every lost hour of production? How much money does it cost just to lose the production or output or whatever it is? Is it \$1 million an hour or \$1 million a minute? We had this number, \$1 million an hour, and it was really effective to quantify in people's minds —

**The Chair:** Is that appropriate to Ontario Hydro?

**Mr O'Toole:** Well, the ministry must have some understanding, "Holy jeez, they're down for a day; that's \$24 million," or whatever it is.

**The Chair:** May I suggest that is a good question for Ontario Hydro. It may be really difficult, in fairness —

**Mr O'Toole:** Does the ministry have some idea? Does \$1 million an hour sound okay?

**Ms Farr:** I don't really have a specific idea. It does depend on the day and what's available, the time of year etc.

**The Chair:** Time of year, peak load, blah, blah, blah.

**Ms Farr:** But Ontario Hydro might provide you with a rule of thumb that you can use.

**The Chair:** Mr O'Toole will likely have that all worked out by Monday.

**Mr O'Toole:** No, I won't. I'll be wondering at the end of December 2.

**The Chair:** Ms Farr, I want to thank you very much on behalf of the committee for being present. Aside from the cross-talk here, we do thank you for attending. Is there anything further that you wish to add?

**Ms Farr:** No, thank you.

**The Chair:** Does anybody else in the deputation wish to add anything?

**Mr O'Toole:** We should have just hired you.

**The Chair:** We thank you very much, then. There is nothing else to be added. We appreciate your testimony. If we need to hear from you, we will invite you back. You can be sure of that.

It being five minutes after 9, if I can take the liberty of doing tonight what we said we might do tomorrow for the first half-hour — Mr Laughren, what do you think?

**Mr Laughren:** As long as we're finished with this deputation.

**Ms Farr:** Mr Chairman, did you want to speak to the municipal electric utilities or not?

**The Chair:** Do you want to deal with that now? All right, let's deal with it right now then.

**Mr Laughren:** That was the deal, yes.

**The Chair:** Fine. Done.

**Mr John Savage:** John Savage is my name. I'm here to speak to the topic of municipal electrical utilities.

I'd like to just start off by clarifying what is meant by distribution in the electrical utility business. The transmission system moves electricity in bulk at high voltage from generating stations to centres of load, such as cities. Transmission lines operate at voltages of about 50 kV, or 50,000 volts, and are almost always overhead lines.

The distribution system is used to distribute power to customers at the local level. Distribution lines may be overhead or underground. They operate at voltages below 50,000 volts, usually 44 kV, 27.6 kV, 13.8 kV or 4.16 kV. The key elements of the distribution system are transformers to step the power down to a voltage suitable for distribution, the lines which bring the power to each customer's premises, and transformers at the customer's premises to step the power down to utilization voltage, such as the 120 volts available in a house.



In Ontario, distribution is carried out by three different types of utility. The Power Corporation Act and its predecessor acts established the right of a municipality to distribute electricity within its own boundaries, and 306 municipalities have chosen to purchase electricity at cost from Ontario Hydro and distribute it within the municipality. Second, where a municipality does not choose to establish a municipal utility, Ontario Hydro is responsible for distributing within that municipality. Finally, when the act of 1906 passed, it allowed privately owned utilities to continue in operation. Over the years, most of them have been taken over by municipalities, but there are still four significant private distributors in Ontario. They are the Great Lakes Power Co, the Canadian Niagara Power Co, Gananoque Light and Power Co, and Cornwall Electric.

I'll just run through a brief profile of the municipal electrical utilities. As I mentioned earlier, there are 306 MEUs in Ontario distributing electricity to 2.9 million customers. They range in size from 115 customers to 220,000 customers. The largest 15 utilities serve over 50% of all the municipal utility customers. MEUs distribute 72% of the electricity consumed in the province. In this respect, Ontario is quite unique. Although other provinces have some municipally owned utilities, no other province has the distribution system dominated by municipally owned utilities.

Ontario Hydro distributes power directly to 103 direct industrial customers and 963,000 rural customers.

Finally, the private utilities serve about 50,000 customers.

Municipal distribution costs account for about 15% of the retail price of electricity. In the case of Ontario Hydro retail, it's about 24% of the price.

Altogether, the municipal utilities have about \$5 billion in equity and about \$200 million in debt.

The structure of municipal electrical utilities: Any city or town which contracts for a supply of power from Ontario Hydro is obliged to set up a commission which then takes control of the utility. A village or a township is not obliged to set up a commission. Some of them have chosen to run the utility directly through a committee of council. In all, there are about 240 commissions with directly elected members. There are about 31 which are run by a committee of council and there are about 35 which have appointed commissions. Each commission normally has either three or five members. The head of the municipal council is an ex-officio member of the commission, although he may choose to appoint somebody in his place.

The commission is responsible for the operation of the utility and does not answer to any other body, with certain specific exceptions. Once a municipality has set up a municipal commission, the commission stands in place of the municipality for all purposes dealing with electricity distribution. The commission sets the policies on service conditions, hires and fires the senior staff at the utility and sets the rates.

Almost all municipal utilities in Ontario belong to an association called the Association of Municipal Electrical Utilities, which provides technical services to its members and in some cases negotiates and liaises with other bodies on behalf of its members.

The regulation of municipal utilities: Municipal utilities are regulated by Ontario Hydro as to rates, capital spending, borrowing, supplying power outside the municipality, and accounting systems. To a lesser extent, the municipal utilities are regulated by their own municipality. The municipality has the power to approve borrowing done on behalf of the utility and also has the right to approve any sales outside of the municipality. Other than these specific areas, the municipal utilities are autonomous.

There are two utilities which do not have their rights approved by Ontario Hydro, because they do not buy any power from Ontario Hydro. They are the Canadian Niagara Power Co and Cornwall Electric. Small, privately owned suppliers of electricity are not regulated under any provincial legislation. However, they must obtain approval from the municipality to construct distribution lines within the municipality.

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Now I'd just like to describe briefly some of the legislation which governs municipal utilities. The two important acts are the Power Corporation Act and the Public Utilities Act.

The Power Corporation Act is primarily an act governing Ontario Hydro, but there are a number of provisions in there which bear directly on the operation of municipal utilities. Part II of the act deals with the supply of power and the relationship between municipal corporations and Ontario Hydro. Perhaps the most notable provision in there is a provision which sets out the price payable for power. This is what is usually known as the power-at-cost section. Part V of the act deals with the control and regulation by Ontario Hydro, and as mentioned earlier, it sets out the various areas in which Ontario Hydro can regulate municipal utilities.

Another section of the act which is of significance to municipal utilities is section 83, which was added in December 1994. This section sets out a process for allowing municipal utilities with restricted service areas to expand their service areas to the boundaries of the municipality in steps.

The other act which governs municipal utilities is the Public Utilities Act. Part III of this act sets out the legal framework for the day-to-day operation of all municipal public utility commissions. It is this act which makes it mandatory for the council of a city or town to establish a commission once they have contracted with Hydro for the supply of power. Section 42 of the act establishes the makeup of the commission and the number of commissioners to be elected by general vote at elections held under the Municipal Elections Act.

Some particular sections of the Public Utilities Act which are of particular interest: Section 31 makes provision that the amount payable to a public utility is a

lien and charge upon the land in the same manner as municipal taxes.

Subsections 37(6) and 37(3) include requirements that approval of Ontario Hydro be obtained before disposing of some or all of the municipal utility or its assets.

Section 44 stipulates that the salary, if any, of the commissioners shall be fixed by the municipal council.

Section 46 requires that when there is a public utilities commission which is supplying more than one utility — in other words, electricity and some other service — the books and accounts of each utility shall be kept separate.

That's about all I'd planned to say.

**The Chair:** Thank you, Mr Savage. There will be questions.

**Mr Kwinter:** I'm just trying to get a profile of a municipal utility. To characterize it, Ontario Hydro is the wholesaler; the municipal utility is the retailer. Is that a fair portrayal of the relationship?

**Mr Savage:** Yes.

**Mr Kwinter:** Are there any municipal utilities that generate their own power or own their own transmission lines?

**Mr Savage:** I believe there are 11 which have some generation, although in no case do they supply all of their needs from their own generation. They are buying power from Ontario Hydro as well. In general, municipal utilities do not own transmission lines, although I believe there are a few exceptions to that here and there with short lengths of transmission line.

**Mr Kwinter:** In those large companies that are into cogeneration and have the ability to supply, generate, do they do that through Hydro or through their local municipal utility?

**Mr Savage:** I'm sorry. I didn't quite follow.

**Mr Kwinter:** I understand that we now get into cogeneration, where there are companies which in their particular processing are generating electricity and some of it is surplus to their needs. They sell it into the grid or they provide it — I'm just trying to find that out, how that works.

**Mr Savage:** In general, you cannot sell power into the grid unless you have a specific, special agreement with Ontario Hydro. I believe there are some cogenerators that do, but you can't just start one up and begin doing it automatically.

**Mr Kwinter:** No. That's what I'm trying to find out, how that works.

**Mr Savage:** You have to have an agreement with Ontario Hydro to move the power out, because it's their grid.

**Mr Kwinter:** Yes, but it's possible to do that, is it?

**Mr Savage:** Some are doing it, yes.

**Mr Laughren:** Maybe you can help me here. MEA has always intrigued me. I've heard them say that they in fact own Ontario Hydro. Have you ever heard that coming out of MEA?

**Mr Savage:** I've heard similar sentiments, yes.

**Mr Laughren:** I don't mean this as a frivolous question, but I've never understood how they come to the

conclusion that they own Hydro. Is there some kind of historical corporate rationale for that, or is there something else here that I don't understand?

**Mr Savage:** Yes, I think the claim is a historically based claim. In 1906 when the original predecessor of Ontario Hydro was set up — I think it was the Hydro-Electric Power Commission of Ontario — it was set up by a group of municipalities in southwest Ontario as a kind of cooperative venture specifically to build generation and take over existing privately owned generation and build the necessary transmission to move the power to the municipalities. At that time, I believe it was widely recognized that Hydro was a creature of these municipal utilities.

**Mr Laughren:** Thank you. I've never heard that explained before.

The only other question I had was following up on Mr Kwinter's analogy of Ontario Hydro being the distributor — manufacturer and distributor, I guess, or wholesaler — and MEA being the retailer. In my own area there is a municipality that gets serviced by Ontario Hydro and has been offered a better deal — a 10% better deal, which is quite a bit, given their bill — if they'll buy from an MEA. How is that possible?

**Mr Savage:** I think I know what you're referring to. Ontario Hydro has approached some municipal councils and offered to take over the operation of the municipal utility at a savings in rates to the —

**Mr Laughren:** Ontario Hydro?

**Mr Savage:** Yes. Is that what you're referring to?

**Mr Laughren:** No. This is the reverse. A local utility, Sudbury, has offered to take over and provide hydro to a small municipality that's currently getting it from Ontario Hydro and has offered them a 10% saving. Am I missing something here? It seemed to me that there would be a lower price from Hydro than Sudbury.

**Mr Savage:** I'm not familiar with the specifics of that one, so I can't really comment. It does seem a little odd.

**Mr Power:** If I understand the facts correctly, and I may not, municipal electric utilities get a better electrical rate from Ontario Hydro than areas which are not served by Ontario Hydro, which is known as the rural rate. So if they are trying to expand their boundary, they can offer the discounted price they get relative to the rural rate.

**Mr Laughren:** It's fairly simple.

**The Chair:** Thanks, Mr Power. That was very concise.  
2020

**Mrs Fisher:** Two questions. First, I understand there are such things as non-utility generators which, upon producing electricity, almost impose the residual electricity to Ontario Hydro through contract. Hydro is obligated — this is a question; correct me if I'm wrong — to purchase back the residual power. If somebody can prove they can produce power for less than what Ontario Hydro can sell it to them for they have the right to go ahead and do that. Often that's done through gas-fed generation. My understanding is that Ontario Hydro's obligated to purchase back any of the residual power that individual business doesn't use. Could you confirm that?



**Mr Savage:** I think Ontario Hydro is only obliged to buy power from any individual or company if there is a contract in place, if Hydro has signed a contract with that company to buy back power. But there is no obligation on Hydro to sign a contract.

**The Chair:** We'll make sure we ask that question as well of Ontario Hydro.

**Mrs Fisher:** The other question I have is with regard to the establishment of an MEU. I was trying to write as you were speaking, and I'm just wondering if I got this right: There are 306 municipal electric utilities right now?

**Mr Savage:** Right.

**Mrs Fisher:** You said there were 11 others — can you come back to that 11 number?

**Mr Savage:** I said there were 11 which have some of their own generation capacity.

**Mrs Fisher:** Is there anything in Ontario where an MEU is other than municipally owned and operated?

**Mr Savage:** There are four privately owned.

**Mrs Fisher:** And those are Great Lake, Canadian Niagara, Gananoque and Cornwall?

**Mr Savage:** Right.

**Mrs Fisher:** Is there any attachment or obligation to the municipality for any of that? Is it a business power provision so they become an MEU? Do they feed a municipality?

**Mr Savage:** They are distributing power within municipalities, yes.

**Mrs Fisher:** To residents?

**Mr Savage:** Yes.

**Mrs Fisher:** Do you have any idea if there is a difference in rates between the private ones and the other 306?

**Mr Savage:** In general, the private ones are cheaper.

**Mrs Fisher:** Do have any idea on the gap?

**Mr Savage:** It would vary depending on what type of customer you're talking about and what the load profile is, but they are cheaper.

**Mrs Fisher:** Talk regular residential; don't bring business into it. If you have the private one — let's pick a place, Gananoque — and you have a municipality it services of X number of residents, do you have any idea on the gap on their sale price of electricity to their residents versus those other 306 by municipal?

**Mr Savage:** I don't actually know what Gananoque's rates are, but traditionally they were lower than Ontario Hydro's. I have a feeling they're pretty close now to the rates in the other municipalities.

**Mrs Fisher:** Each of the four we've named here are servicing communities, residential communities, maybe a mix and blend of commercial and all the rest as well?

**Mr Savage:** Yes.

**Mrs Fisher:** Are there any you know of, or have you ever heard of any being applied for, that are specific to an individual business? Have you ever heard of an application for an MEU for a business?

**Mr Savage:** An MEU, by definition, is a utility set up by the municipality to serve its inhabitants. A municipality couldn't set one up just to supply one business.

**Mrs Fisher:** Could a business set one up for a series of businesses in an industrial park?

**Mr Savage:** I don't believe it would be a municipal utility, no.

**Mrs Fisher:** Have you ever heard of that breed?

**Mr Savage:** I've never heard of it being done successfully, no.

**Mrs Fisher:** Successfully? Thank you.

**Mr Laughren:** As an example in my area, Inco generates about 15%. It's a huge energy consumer. It generates 15% of its own hydro, but to my knowledge it doesn't feed into the grid, but I'm not sure of that. They generate a huge amount of electricity, all through hydraulic. You couldn't consider them MEU because they're strictly — well, originally, it was for their own purposes. Maybe you could tell me, do they plug into the grid?

**The Chair:** There's energy from waste, a whole range of things we might be looking at. The EFWs alone pose other interesting issues.

**Mr O'Toole:** I'm familiar with the rural rate and the MEU rate. Is the MEU rate a flat rate or is it peak or is it an average rate?

**Mr Savage:** Each municipal utility has its own rate. Each of them has a series of rates.

**Mr O'Toole:** I'm talking about their purchase of it from Ontario Hydro.

**Mr Savage:** The wholesale rate from Ontario Hydro?

**Mr O'Toole:** Yes, the wholesale rate. Is that flat, bulked up, how much they sell, what?

**Mr Savage:** No, I believe it's time of year, based on time of day and so on.

**Mr O'Toole:** So there's kind of a grid there —

**Mr Savage:** There are different rates at different periods.

**Mr O'Toole:** I'm always amazed — this may be just a side comment, but I'm very familiar with the MEUs in our area. The vice-president, soon to be president, lives in my riding and keeps me up to date, Pauline Storm, an interesting person. I've always wondered how in the heck they can actually buy a product from a company whose extensive mandate is to make the product and actually make money on it. You've described their debt-equity stuff, and they seem to be in a pretty good position. Is Hydro selling it at cost? That's the question. Are they actually selling it at cost?

**Mr Savage:** Hydro is required by the Power Corporation Act to sell it at cost.

**Mr O'Toole:** Is it the same rate, based on hour of day and peak load and all those common factors, between one municipality and its MEU and another?

**Mr Savage:** Yes.

**Mr O'Toole:** So it would be the same because it's bought off the same grid.

**Mr Savage:** Yes. There are slight differences depending on the voltage you buy it at, but in general every municipal utility has the same rate for power for Ontario Hydro.

**Mr O'Toole:** Could I ask an opinion? It's not fair, quite often, to ask staff. If I look at the experience in Australia, the government actually controlled the distribution side. They let the generation side get deregulated and fight it out, but they controlled the wires. Do you have any views on that, that maybe that's where the government should focus its — that's actually the monopoly position. If you haven't got the wires, you can produce all the power you want, but you can't distribute it. Have you got a view on that at all?

**Mr Savage:** The wires here in general are owned by governments too, either directly or indirectly.

**The Chair:** Thank you very much, Mr O'Toole. Just before you finish, a question: I want to pick up on a question raised by Mr O'Toole to make sure we're very clear on your answer. To your knowledge, the wholesale rate set by Ontario Hydro is the same for every municipality? Was that your response?

**Mr Savage:** Essentially, yes.

**The Chair:** Then it's up to each of the retailers to add on their mark-up according to their own determinants.

**Mr Savage:** Based on their own costs, yes; they add their own costs.

**The Chair:** For example, the city of Toronto has decided it's going to commit itself to a \$2-billion underground construction project and it's passing that on in the rates. That's a local commission's determination.

**Mr Savage:** That's right.

**The Chair:** I got myself into some trouble a few years ago, when I spent six years as a hydro commissioner, by suggesting that I found it hard to understand why in Metropolitan Toronto, for example, we have six electric companies. I couldn't quite understand how the hydro differed on one side of, say, Sheppard, as opposed to the other side. I puzzled over this. Unfortunately, I was still learning politics at the time, and I learned in a hurry how quickly the issue is not just a matter of power. Well, it is a matter of power, but not the kind of power I'm talking about. I suddenly discovered that as I walked into that rat's nest, and have spent the rest of my life doing mea culpas.

I wonder if you could respond to a question a layman might ask. When you flick the switch on, one doesn't know if it comes to you from Toronto Hydro or North York Hydro or Ontario Hydro. It's just that the damned light had better go on. Having said that, would it follow that one might ask: "Do I need to have all these intervenors? Why wouldn't I just buy it directly from Ontario Hydro?" Second, am I going to be able to do that if we're moving into new technology, like fuel cells and everything else? What's the role of MEUs? Just a simple question you might want to muse on for a moment.

**Mr Savage:** Of course there are almost one million customers in Ontario who do buy directly from Ontario Hydro. The fact that they're paying higher rates than everybody else is probably the main reason Etobicoke Hydro exists.

**The Chair:** So they're paying higher rates than those who are getting it from a retailer?

**Mr Savage:** Than those who are getting it from a municipal utility, yes.

**Mr Laughren:** There's a good reason for that.

**The Chair:** I'm just asking in response to the questions, that's all. Carry on, please.

**Mr Savage:** If you're asking why there are six municipal utilities within Metro Toronto, that's a political reason for that. There isn't a good technical reason. Indeed, after January 1 there will only be one, of course.

**The Chair:** Would you like to respond to why there would be a higher rate charged for those buying directly from Ontario Hydro?

**Mr Savage:** In general, Ontario Hydro is serving the parts of the province that are the most difficult to serve, like the rural northern communities, which are more expensive because there's a lot more line per customer. Generally speaking, an urban service area is much cheaper to service than a rural service area.

**Mr O'Toole:** Just for the sake of information, the utilities in Durham — I believe there are seven, including Hydro; Ontario Hydro is one of the distributors — have tried to put together a plan where the whole grid for the region would be taken over. Those are the very discussions we're having. It's important, maybe, to say that there is a variation in the actual rate charged which is passed on, which really means the operating cost of the local ones. Just as an interesting aside, if you look across Ontario, regulations don't govern the MEUs and what they can pass on.

**The Chair:** Mr Savage, thank you very much for your presentation. There are no other questions. Again, my thanks to Ms Farr, Ms Brandon and Mr Savage. Thank you very much for attending upon us. We appreciate that.

We had an agreement that we would conclude as soon as we finished this portion of the witnesses tonight. We will reconvene tomorrow at 3:30 in this committee room for the purpose, in the first instance, of meeting in camera with our consultants. We will adjourn at this point, since we have now completed our testimony at this juncture.

**Mr O'Toole:** On the MEU presentation, is there a chance of getting a copy of that? There were quite good data there. It sounds like you had it written down. I wouldn't mind a copy.

**Mr Savage:** I'll see what I can do. A lot of it's just handwritten.

**Mr O'Toole:** Just the data part of it. I thought it would be a good little fact sheet to put in our book here.

**The Chair:** We have agreed tomorrow at 3:30 just to meet with our consultants; that'll be in camera. That'll be the only purpose of the meeting tomorrow. We have concluded our witnesses in terms of the ministry.

**Mr Kwinter:** And at 4 o'clock we deal with the Macdonald report.

**The Chair:** I was just going to say, from 4 to 5 we deal with the Macdonald report. Fine. We stand adjourned.

*The committee adjourned at 2034.*





## CONTENTS

Tuesday 30 September 1997

<b>Subcommittee report .....</b>	<b>H-5</b>
<b>Ministry of Environment and Energy .....</b>	<b>H-7</b>
Ms Deborah Farr, manager, electricity operations and planning	
Ms Cynthia Brandon, counsel, legal services branch	
Mr John Savage, adviser, electricity operations and planning	

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H-3

H-3

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# Legislative Assembly of Ontario

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# Assemblée législative de l'Ontario

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Wednesday 1 October 1997

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Mercredi 1<sup>er</sup> octobre 1997

Select committee on  
Ontario Hydro nuclear affairs

Comité spécial des affaires  
nucléaires d'Ontario Hydro



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## LEGISLATIVE ASSEMBLY OF ONTARIO

## ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

SELECT COMMITTEE ON  
ONTARIO HYDRO NUCLEAR AFFAIRSCOMITÉ SPÉCIAL DES AFFAIRES  
NUCLÉAIRES D'ONTARIO HYDRO

Wednesday 1 October 1997

Mercredi 1<sup>er</sup> octobre 1997

*The committee met at 1620 in committee room 228, following a closed session.*

**The Chair (Mr Derwyn Shea):** The committee is now in public session. I'll report out from the in camera meeting a decision by the committee. We have discussed terms of reference for both the consultants and our legal advisers, and it has been agreed by the committee that they leave the matter of finalizing the terms of reference and the rates to the Chair. That will be embraced in the budget that is finally presented to the committee for approval.

MINISTRY OF ENVIRONMENT  
AND ENERGY

**The Chair:** We had agreed that the remainder of the time today, until 5 o'clock, would be spent discussing the Macdonald report. To that end, I'd ask the staff to come forward and continue with that briefing.

**Mr Peter Fraser:** My name is Peter Fraser. I'm the senior adviser on electricity restructuring, in the policy division of the ministry. This is my colleague Cynthia Brandon, who is a lawyer in our legal services branch.

As you said, Mr Chairman, I'm here to talk about the report of the Advisory Committee on Competition in Ontario's Electricity System. I understand that a copy of the report, A Framework for Competition, has been made available to you. In the time today, I'd just like to go over terms of reference the government set up for the report and also summarize highlights of that report. Of course I'd be available for questions at any point during my presentation or after, whatever you prefer.

To start by just going over those terms of reference, which are included in your copies of the report, the committee was chaired by the Honourable Donald S. Macdonald, set up in November 1995. It had terms of reference, which are in appendix A, I believe. I'll just go over the highlights of those terms of reference.

The first point was to examine economic, technological and public policy trends facing Ontario Hydro and the provincial electricity system and the existing barriers to change. I have a point of clarification as to what those were about.

"Economic" was referring particularly to the need for competitive electricity rates.

"Technological" was referring first and foremost to the amazing amount of technological change that has been occurring in the electricity generation sector, making

possible more economic and smaller-scale electricity generation, particularly fuelled by natural gas, than had been available a few years before.

On the third, public policy trends, I'd just point out that a number of jurisdictions around the world have been restructuring their electricity systems. The UK is the most often cited example, but also Scandinavia, Norway, Sweden, Finland, Australia — all six Australian states — are now in the process of restructuring their systems; New Zealand; a number of countries in eastern Europe as well; and the European Union will be opening up their system to competition beginning in 1999. That will give you a sense of the kinds of changes that are going on around the world.

The second main point was to make recommendations on structural legislation and potentially ownership reforms required to ensure that Ontario Hydro and the provincial electricity system are poised to meet the competitive challenges of the 21st century. That was very much in light of those trends going on. In coming up with those recommendations, the committee was asked to investigate and assess options for enhancing competition in the electricity system in the following areas: first of all, to look for structural change options, including what's called the unbundling of Ontario Hydro, or separating its generation business from its transmission business and distribution business and energy services businesses; introducing competition in electricity supply; enhancing efficiency in the distribution sector; the appropriate regulatory framework to encourage a competitive electricity market; to look at the relative benefits and consequences of options for introducing private equity as a means of enhancing competition, including the sale of Ontario Hydro's non-essential business operations or its generating assets.

The committee, in assessing models for reform, was asked to look at potential impacts with respect to rates and how they affected all customer classes, or rate equity; increasing economic efficiency; impacts on power system reliability and the obligation to serve; economic competitiveness and regional economic impacts; the implications for public finance, including public sector debt and provincial and municipal government revenues; first nations and aboriginal issues; electricity trade and energy security; the arrangements for nuclear power — which was a pretty open-ended look at anything from the structure of the nuclear division to decommissioning and fuel waste disposal; local accountability; sustainable development. They had to consult broadly through public forums and

written submissions and deliver the final report to the minister by April 30.

To quickly go through the process they actually went through, in December they released a working paper for discussion and invited comments and submissions. They received over 200 submissions from stakeholders — about half were made by municipal utilities — on those issues. They held six public meetings in Guelph, Toronto, Peterborough, Sudbury, Thunder Bay and London to solicit public comment. They also met with a number of interested parties privately, and they commissioned consultants to assist the committee on a number of issues. Those reports are available to this committee if they are interested. The committee submitted its report in early May 1996, and the report, *A Framework for Competition*, was released in June.

If I could just give you some of the highlights or key design features of the committee's proposal to introduce competition in Ontario's electricity system: proposing to move away from a public monopoly system to one based on competition, one where publicly owned generators are acting as commercial companies competing under the same terms in terms of selling electricity, in terms of raising capital to build new plants or paying taxes as private companies; Ontario Hydro Retail and municipal utilities would be reorganized and merged to create approximately 50 county or regional distribution companies; there would be a competitive electricity market at the wholesale level and a publicly owned electricity exchange to manage the financial trading of electricity; municipal utilities, customers, agents, brokers, marketers would be able to buy power from generators, either inside or outside the province, or from the spot market established by the exchange; there would be open access to the transmission system; there would be a separate, regulated monopoly, with a postage-stamp rate for all customers, meaning that the rate for customers would not vary and would be the same regardless of location within the province; there would be a publicly owned system operator to ensure that the system continued to operate reliably. Those were the structural changes.

They also recommended a number of changes to the regulation of the electricity system. Currently, as you know, Ontario Hydro's board of directors has a responsibility to set wholesale electricity rates and also to approve the rates of municipal utilities. Under this system, the Ontario Energy Board would become an electricity regulator, with a comprehensive mandate to regulate the rates of the transmission and distribution monopolies. They would have an interim responsibility to regulate the price of generation until that market became competitive. They would have to regulate the independent system operator to make sure it was doing its business efficiently. Finally, it would have oversight of the rules for the competitive wholesale market to make sure they were truly fair to all market participants.

They would also have a role in commenting on the competitive structure of the generation business, whether one company had too much influence over prices in that

market; and they would complement the role the federal competition bureau plays under the Competition Act in that respect. The regulator would also have the responsibility for approving special changes, including subsidies to rural areas, through charges on the transmission system or using other mechanisms.

#### 1630

Finally, in the area of ownership, the committee did recommend divesting some major assets after the market and the independent regulator were established. Also, they made it very clear that regardless of public or private ownership, there should be a commercial level playing field for access, for dividends that a publicly owned company would pay, the taxes they would pay; and the regulation that would fall under would be the same as a privately owned firm.

The final part of the report was a proposal on how to phase in competition. The committee recognized that competition could not come all at once but recommended a staged phasing. The first phase they call vertical unbundling. They meant that they would separate Ontario Hydro's generation and transmission business into separate companies and divest Ontario Hydro International.

In the second phase, once the legislation had been passed, they would establish commercial public generating companies, establish a level playing field between public and private companies. They would create a financial holding company called the Ontario Hydro Acceptance Corp for the excess debt that those commercial companies could not carry in a competitive market. They would establish an independent electricity exchange, also the legal framework for the new regulator, and they would also reorganize the municipal utilities, Ontario Hydro Retail, into the 50 county or regional distributors.

After that had been done, in their third phase they would begin the wholesale market. They would begin access. Municipal utilities would be able to choose the supplier of electricity, and the large electricity customers of Ontario Hydro and the municipal utilities would also be able to choose. The regulator would have oversight over the market rules. Once that is up and running, they suggested that divestiture of major assets of Hydro should occur.

Finally, they suggested in the long run all customers should have choice.

They did not set out an explicit time frame for those steps but they implied that the wholesale market could be started as soon as 1999.

That's my presentation on this report. I'd be happy to take any questions anyone may have.

**The Chair:** All right. Who wants to start off?

**Mr Adam Chamberlain:** I just have a few simple questions, I believe. The first one would be, what authority does the Ministry of Environment and Energy have to regulate Ontario Hydro?

**Ms Cynthia Brandon:** Could you be a little more specific when you say "regulate" Ontario Hydro?

**Mr Chamberlain:** Simply put, does the ministry itself regulate Ontario Hydro?



**Ms Brandon:** So you're not asking with reference to whatever Macdonald was proposing?

**Mr Chamberlain:** No.

**Ms Brandon:** As the ministry addressed yesterday, with respect to the overall structure of Ontario Hydro and the government and the Power Corporation Act, Ontario Hydro's board of directors is appointed by the Lieutenant Governor in Council.

**Mr Doug Galt (Northumberland):** Mr Chair, I think this is out of order. This was discussed very thoroughly yesterday.

**The Chair:** Mr Galt, it was an area that the committee had asked.

**Mr Galt:** It was walked through quite carefully by staff yesterday.

**The Chair:** You weren't here, but there was a question raised in the closed session just before we began today asking that we get something on the record. We did go through it. All the committee members wanted to have this on the record, the question and the answer; that's all.

**Mr Chamberlain:** I'm asking a very simple question that I think has a very simple answer. I understand your points about the appointment of board members. The question is, though, is there regulatory power in the Ministry of Environment and Energy over Ontario Hydro, aside from what you've already discussed?

**Ms Brandon:** Aside from what was discussed yesterday, no; I believe we touched on it. There are all the activities that were outlined yesterday that require approval by the Lieutenant Governor in Council. We also touched upon the fact that the electricity rates set by Hydro are not regulated but are determined by Hydro. I guess it depends on what you mean by "regulate." If you mean regulate like the OEB regulates gas, the answer is no, the government doesn't play a role that way. If you mean regulate as in, are there controls over Ontario Hydro, then I would say yes, and that was what I think we outlined yesterday. I guess it depends on what you mean by "regulate."

**Mr Chamberlain:** I think what I mean by "regulate" is more what you're talking about with respect to OEB and gas.

**Ms Brandon:** Okay. There is not a relationship between the government and Ontario Hydro, I would say, that is comparable to the relationship between the OEB and the gas industry.

**Mr Chamberlain:** Are there are any other provincial authorities in Ontario with that regulatory authority over Ontario Hydro?

**Ms Brandon:** The AECB has authority.

**Mr Chamberlain:** That's a federal body.

**Ms Brandon:** Oh, provincial. I'm sorry. I should have been clear, actually. There is the Environmental Protection Act, of course. There is a number of different pieces of legislation that Ontario Hydro would comply with in its activities, under which it would seek approvals, so it would be regulated in that sense, as is any other corporation in the province.

**Mr Chamberlain:** But in terms of specific regulatory authority, that which I was describing with respect to the

Ministry of Environment and Energy, I suppose your answer is the same as it was for the Ministry of Environment and Energy. Simply put, if the Ministry of Environment and Energy does not have the power to regulate Ontario Hydro, do any other provincial authorities have that regulatory power?

**Ms Brandon:** Regulate which activities of Ontario Hydro?

**Mr Chamberlain:** I mean it in terms of the way in which I just described the Ontario Energy Board dealing with gas, for instance.

**Ms Brandon:** To the extent that the Ontario Energy Board regulates the gas industry with respect to licensing, with respect to approvals to build transmission, yes, there the Ontario government needs to give LGIC approval for Hydro to undertake building and acquiring lands and things like that, so there's a little bit of comparability there. But I think you're going to rates. I'm guessing here, but if that is what you're going to, I would agree there is no provincial agency that plays that comparable role.

**Mrs Barbara Fisher (Bruce):** I guess this is a follow-up on a question I started yesterday and is having difficulties getting a clear answer on, and I still am not very clear. I don't mean to be rude by saying that, but I will ask it again.

What I and I think others are trying to establish is, what is the role between the Ministry of Energy and Ontario Hydro? Where does the decision-making capacity begin and end? If the Ministry of Energy, through the minister's office, delivers on policy change to Ontario Hydro and to the electricity provision in the province of Ontario, who makes that decision? Clearly, what I think we want to ask is, does the Ministry of Energy have any jurisdiction over the decision-making capacity of the board of directors of Ontario Hydro? When a government decides it wants to have a change in policy as it relates to energy policy for the province that day and thereafter, how does it get into Ontario Hydro to convey that policy direction change, and does it have any legal authority to do so? That's what I was after yesterday, and I think we're back there.

**Ms Brandon:** If it's okay with the committee, Peter, as a member of the electricity policy branch, will address the question, and if I can supplement at all, I will.

**Mr Fraser:** I wasn't here yesterday but I'll just give an example, one I was involved with, which is the current government's five-year freeze on electricity rates. That was a cabinet decision, and that was formally conveyed to the Ontario Hydro board by means of a letter from the minister to the chair of Ontario Hydro. A letter from the minister to the chair of Ontario Hydro does not have statutory authority. The rate-setting power is under the Ontario Hydro board of directors, but they do take due regard of government policy in that way, as Cynthia can no doubt elaborate. The government does have a more formal statutory power, called a policy directive, under section 10 of the Power Corporation Act. It did not use that power to do that.

**1640**

**The Chair:** Let me remind the committee that we did say we would begin by getting something on the record, but we are here for briefings on the Macdonald report, so I'd like us to get our questioning focused around the Macdonald report.

**Mr Floyd Laughren (Nickel Belt):** I think this is interesting. I do think it needs to be out there that Hydro basically sets its rates, the Ontario Energy Board says aye or nay and recommends a different rate, and then the Hydro board statutorily, I believe, can ignore or not the Ontario Energy Board's recommendations. I appreciated your comments about the letter to Hydro from cabinet, probably the Premier. I'm not sure who it would come from. I can remember this happening too in government.

We shouldn't kid ourselves. The entire Hydro board is appointed by Lieutenant Governor in Council, right? I think every single one of them is. So any Hydro board that ignored a directive of the government — it would be a very strange scenario. I suppose it could happen, but I don't know how long they'd be there. I appreciated the directness of the answer.

I don't know what control anybody has over Ontario Hydro. I don't know. Maybe AECB does, in terms of safety and so forth. I don't know who has any other kind of control over Hydro. What am I missing? Other than AECB, which is a federal agency, does anybody in the province have any statutory control over Ontario Hydro?

**Ms Brandon:** As I've earlier noted, there are, for example, Ontario Hydro's requirements to comply with the Environmental Protection Act. That's all control over their activities. But in terms of control of activities that I believe you're referring to, control would be through the order-in-council process. If it's a matter that requires order-in-council approval, that matter has to be brought before cabinet and cabinet may approve or not approve the proposed activity.

**The Chair:** I don't want to belabour it. I think, frankly, the committee has had enough time on this one. It's on the record. I think we've dealt with it. There will be other places in the hearings to visit this again. We've now had an opportunity to hear from both sides of the committee. I would like us to turn our attention to questioning on the presentation made on Macdonald.

**Mr Sean G. Conway (Renfrew North):** It has been a while since I've read the Macdonald report, but I was refreshing myself in preparation for today. The question I have for you may be a little unfair to ask you, but I would like to, since you are senior policy adviser on these matters.

The Macdonald report and much of the literature around the electricity today focuses almost entirely on "the market" and on this commodity that is important. I think we all accept that. When I look at the Macdonald report it talks about a variety of options.

One of the things that really strikes me is that there seems to be little or no consideration, in Macdonald and much of the rest of this debate, quite frankly, about what once was a very, very major part of the policy debate in

this province and country, namely, the strategic importance of electricity. I want you to comment on this with particular reference to Macdonald, as you understand it.

We live next door to the only superpower left. One of the things that always strikes me about the American political debate is the overwhelming, almost obsessive, interest in oil. Oil is a commodity that has a hell of a lot more to do with than just energy. If you read the front page of today's New York Times, for example, are they upset about what the French are doing in the Middle East. Why? Because the Middle East is so fundamentally important to that oil patch.

I come back to Macdonald. I keep reading this stuff. There is no strategic importance, apparently, left to electricity. We are big piece of real estate that is very cold for six months of the year. I wondered if you agree with me that there didn't seem to be much in the Macdonald report about what I will call the strategic importance, to past governments and business and labour leaderships in this province and country, about electricity and what it means in a country this big, this empty and this cold for four or five or six months of the year. Has that ingredient just dropped out of the equation entirely?

**Mr Fraser:** In the context of the Macdonald report, I don't recall reading anything that was put quite that way. They certainly were concerned about security of supply and also continuation of a reliable supply. On the evidence of electricity markets that have opened elsewhere, there has been both a surge in the development of new generating stations and day-to-day reliability has been maintained or in some cases improved.

In terms of the issue of electricity as a long-term strategic asset, I would agree with you on the Macdonald report, that that's much more on the issue of competitive price rather than a competitive asset.

**Mr Conway:** Would I be right in stating that historically in the province of Ontario politicians and community leaders have generally looked at electricity, particularly the electricity commodity, as being important not just for its economic ingredient but also for some of the attendant political and social factors? For example, if you don't have electricity in Nickel Belt in the middle of winter, it's rather different from not having electricity in the Mississippi delta in the middle of winter.

**Mr Fraser:** No. In that case, it's not having it in the middle of summer there, where their electricity load peaks.

**Mr Conway:** But you could survive in the delta in the summer without electricity.

**Mr Fraser:** A lot of people die in summer heat waves.

**Mr Conway:** Actually, they died in Chicago.

**Mr Fraser:** That's right. But I take your point about the security of supply. There is an underlying assumption that a market will encourage other people to invest in the electricity business. As I said earlier, the limited experience in other jurisdictions to date does indicate that people are willing to come in and build new plants because they see an opportunity to generate electricity more cheaply.

**Mr Conway:** Macdonald talks about privatization of a lot of the assets. As I recall, he talks about privatizing



most of the hydro-electric assets save and except Niagara Falls. One of the questions that struck me in this report is that one of the most interesting and difficult issues facing previous legislatures and governments in this province was developing the interprovincial power in my part of eastern Ontario along the Ottawa River, and certainly the international power along the St Lawrence. I read Macdonald and I don't get the sense that — it's just not an issue any more.

I just wondered whether I was the only one who thought, for example, living on the Quebec border as I do, that the Ottawa River plants — one of the anchors is Ontario and the other anchor is in Quebec. I thought to myself, any disposition of the hydro-electric assets on the Ottawa River I presume would attract the interest of Quebec City. I have a feeling that the government of Quebec would have a real interest in the disposition of those assets. In fact, I have a feeling that a lot of the people I represent, in their more private moments, might be a little interested and concerned about the disposition of those assets, one half of which is anchored in the province of Quebec. Am I just some kind of oddball Cassandra who thinks these thoughts and no one else imagines them?

**Mr Laughren:** That's true, but it hasn't anything to do with the question.

**The Chair:** Hansard will strike that comment.

**Mr Conway:** Those assets didn't develop easily or overnight, I guess is what I'm saying.

**Mr Fraser:** As you say, when there is an asset straddling a border, that's something that has to be recognized in terms of any possible changes in its ownership, regardless of who owns it today.

**Mr Conway:** Would you share any concern I might have about the fact that in Macdonald there is no evident concern that that might even be an issue?

**Mr Fraser:** I don't know. You would really have to ask Mr Macdonald about that.

1650

**Mr Laughren:** One of the things that puzzled me about Macdonald — and maybe I missed something in his pitch — when he suggested separating out the nuclear units and operating individually, almost competitively, separate from the fossils and from hydraulics and so forth, was that I always thought one of the good things about Hydro was the blended price. It's a lot more expensive to produce nuclear than hydraulic, obviously. How in the world would you do that? How would it work if you didn't have that blended price? If you didn't, if you said, "Oh, I can still have a blended price," then what's the sense of doing the separation?

**Mr Fraser:** In principle, what you'd find is that you have hydro-electric assets which produce power very cheaply right now and the nuclear ones are very expensive. The expectation of the advisory committee was that prices would drop below the level at which the nuclear plants are producing power today; the price on the market would be lower than today. Even though you had your hydro-electric assets making money, basically your nuclear plants would not, but the price to the customer would

actually be lower than what they would be paying today, as low or lower.

**Mr Laughren:** But where would the supply come from? Wouldn't the nuclear plants still be operating?

**Mr Fraser:** In the report they recognize — the problem with the nuclear plants, in their analysis, was mainly that they cost too much to build and they were carrying more debt than they could sustain in a competitive market. That's why they had this stranded assets chart.

**Mr Laughren:** Oh, I see. If they got rid of the debt, they could compete.

**Mr Fraser:** If they got rid of the debt, they could compete in that market at that price. I think they used a generation price of three cents a kilowatt-hour.

**Mr Monte Kwinter (Wilson Heights):** Mr Fraser, I wonder if you could give me your interpretation. The main purpose of the Macdonald report really was to take a look at the competitive aspects of Ontario Hydro. Some people equate that with privatization, but that isn't necessarily so. Their mandate was to look at the competitive aspects of Hydro.

My interpretation of "competitive" is that if equal to or lower than the cheapest hydro available, you're competitive; if you're more, you're not competitive. Where I have a problem with the Macdonald report, and I'm having difficulty getting around it, is that they say:

"An important step is to identify and remove the legislative and other barriers so that all participants, public or private, face the same external costs and operate under the same set of rules. Ontario Hydro's preferential access to capital markets by virtue of the provincial debt guarantee and its tax-exempt or tax-reduction privileges compared with privately owned utilities are major obstacles to achieving a level playing field in the electricity industry in Ontario."

They're saying: "Ontario Hydro is far more competitive than we are because they have all these advantages. They have the government guaranteeing its debt. They don't pay tax. They have all these things. We want that removed so that we have a level playing field." A level playing field isn't necessarily a competitive field, it's just level; everybody rises to whatever the true cost is. Yet we're talking about competitiveness. I don't quite understand how that equates.

My colleague was talking about how energy and electricity are very important competitive components when attracting industry, and Macdonald talks about it often. Yet the recommendation is that these things should be removed so that it will find its own level, which invariably, if he's critical of the fact that Ontario Hydro has all these benefits, should raise the price of electricity. Do you have any comments on that?

**Mr Fraser:** I think what the committee assumed was that making the power market open to, say, surplus supplies, initially from other jurisdictions, from the US or from Quebec or Manitoba, would all help depress the price. Even though publicly owned generating companies would now face these additional burdens, they would be more than offset by the influx of this cheaper generation,

so that would force them to lower their prices to below today's levels. That's how they came up with their forecast of three cents.

There is market trading going on right now in the US, in the region just west to us. It's a relatively small market, but the prices there are, in Canadian cents, in the two-and-a-half-to-three-cent range. So it doesn't seem to be that unreasonable to assume.

**Mr Conway:** But that's the Ohio coal market too, right?

**Mr Fraser:** Right.

**The Chair:** There are no other questions? Thank you very much, Mr Fraser. Thank you very much, Ms Brandon. We appreciate your appearing before the committee.

Before the committee goes, Mr Galt has asked that the committee go in camera for a moment. I'd ask committee members to please stand by. The others may leave the room. In the meantime, formally the committee will be adjourned until Monday at 3:30 pm. We will begin then the deputation from Ontario Hydro.

*The committee continued in closed session at 1656.*





## CONTENTS

Wednesday 1 October 1997

<b>Ministry of Environment and Energy</b> .....	H-37
Ms Peter Fraser, senior adviser, electricity policy branch	
Ms Cynthia Brandon, counsel, legal services branch	

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H-4

H-4

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## LEGISLATIVE ASSEMBLY OF ONTARIO

## ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

SELECT COMMITTEE ON  
ONTARIO HYDRO NUCLEAR AFFAIRSCOMITÉ SPÉCIAL DES AFFAIRES  
NUCLÉAIRES D'ONTARIO HYDRO

Monday 6 October 1997

Lundi 6 octobre 1997

*The committee met at 1530 in room 151.*

## ONTARIO HYDRO

**The Chair (Mr Derwyn Shea):** The select committee will be in order, please, and we continue with our agenda. You will note we have three witnesses before us today from Ontario Hydro. Let me just go through a couple of pieces of information for the committee that flows from the subcommittee's meeting earlier today, just to remind us of our proceedings to make sure that we can facilitate the work of the committee.

The first is, we have determined that the witnesses will have an opportunity for five minutes each. I welcome you, Mr Farlinger, and I'm pleased that you're here, and Mr Fox and Ms Clitheroe. They'll have a chance to speak for five minutes each, and then we will proceed into questioning by the select committee. We will proceed by caucus because, as we know, members of the House may join us from time to time. That makes it awkward to be quite as easygoing as we were in the past week. We will rotate by caucus, five minutes at a time, and we will keep moving around. The caucuses may wish to focus their questioning upon one witness or another, as the topics lead them, in progression.

Clearly, all of our witnesses will have the opportunity to be invited back. I think this will not be the only time that we may have a chance to chat. For that reason, I want to explain why it is determined by this committee that today we will focus upon what went wrong and why, and I think Mr Farlinger is aware of our intent to move in that direction. Then we will proceed at a later stage in the questioning by the select committee to consider the recovery plan and any other information that may flow from other government papers or papers from any other source.

So for today, I will ask the committee members to keep their questioning, their explorations, very tightly focused. If all the caucuses would give me their cooperation, I would appreciate that, and we'll have a good use of our time today. As I mentioned, we will rotate.

There is information put before members of the committee that you may or may not wish to use from our general counsel and from our consultant that may be of help to you. You may also choose to disregard that, members, and move down areas of your own interest for questioning.

Finally, as the witnesses are asked to proceed into their testimony, I would, for the purpose of Hansard, ask them

to do us the courtesy, although they are all well-known in their own rights, of identifying themselves and their positions. Having said that, we will proceed then with the testimony. Mr Farlinger, we are in your hands.

**Mr William Farlinger:** Mr Chairman, my associates were planning to speak for five minutes. I was planning to speak for 15. If you give me 10, I could probably get through my remarks.

**The Chair:** I would think the committee would be of a mind to approve that. Agreed? Yes.

**Mr Farlinger:** Thank you.

**The Chair:** We are asking to be sure that we are focused in that area.

**Mr Farlinger:** Yes. I think the last part of what I was going to say is on a little different tack, so we'll leave that for another day, or for the future.

Thank you very much for inviting us here. We appreciate the opportunity of being here today. This committee will examine Ontario Hydro's independent, integrated performance assessment of its nuclear business and its recommendations for improving the performance of nuclear generation. This afternoon I'll try to provide a background on why a brutally honest assessment of Hydro's nuclear business became necessary. Secondly, I'd like to review the facts that formed the basis for the Hydro board's decisions on the nuclear assessment and the recovery program. Finally, I'll review the key features of the plan, including its potential impact on hydro in the province.

I'd like to begin by tracing for the committee the declining nuclear performance and the decisions by the Hydro board to take corrective actions. The board's actions have led to the NAOP.

When I arrived at Hydro in late 1995, and even before that, from my previous work in the industry, the reputation of Hydro Nuclear seemed sound. A trip to the UK I took in 1994 suggested that British nuclear people held Hydro Nuclear in high esteem, but it's clear that Hydro's Nuclear reputation did not match the reality.

Disturbing signs of nuclear decline were already apparent at the time I took over the chairmanship in late 1995. Nuclear plant production was down. In the spring of 1996, all the Pickering units went down at one time. We were in trouble with our regulator, the Atomic Energy Control Board. There were short-term shutdowns, licences to operate at less than full power and shorter licence periods — six to nine months rather than the normal two years. It



was becoming increasingly questionable whether units would be able to return to service on schedule.

In fact, they didn't. Peer evaluations showed a significant decline in the condition of the stations and serious attitude problems among the staff.

The deteriorating availability of the nuclear units prompted the board to voice concerns and management to develop a nuclear excellence program over the spring of 1996. This plan had a small impact but was not dramatic enough to provide assurance that nuclear availability would be restored. Performance targets continued to fall well short of the mark, with capacity factors declining from 73% to 60% over the last four years.

In fact, I remarked on this decline in a number of speeches during the fall of 1996. At the IPPSO conference in October, I said there was a time when the operation of our nuclear facilities was seen to be in the top 10% of nuclear plants in the world. I went on to say, "Now we are clearly in the bottom decile."

The Hydro board's concerns continued into the fall of 1996, and while nuclear performance targets had been clearly identified, the board was becoming seriously concerned that they would not be met. That concern was well communicated to Hydro management. It was clear that past approaches of self-diagnosis and pulling ourselves up by our bootstraps were not doing the job. Hydro needed people changes, serious outside help and a completely revamped approach.

In the fall, our CEO went out and, with the assistance of the Institute of Nuclear Power Operators, INPO, recruited Carl Andognini to select a team of the best nuclear turnaround people in the world. Mr Andognini was given the mandate to identify all that needed to be done to bring our plants up to high world standards of performance. Carl Andognini was appointed chief nuclear officer in January 1997 and his nuclear performance assessment group began their assessment work early in 1997, completing that work and making their final report to the Hydro board in August, following three interim status and progress reports.

They presented to the board the independent, integrated performance assessment on nuclear and a subsequent nuclear asset optimization plan. The first assessed the condition of Hydro's nuclear program; the latter provided a recovery blueprint for this province's considerable investment in nuclear technology.

That's the background leading up to the recovery plan. Let me comment on its reception by the Hydro board. The revelations to the board over time on the deteriorating condition of the nuclear plants were confirmed by the IIPA. The IIPA progress reports over the four previous months had clearly portrayed significant deterioration in the operating conditions of the stations. By August, the board had come to the realization that action had to be taken to begin to arrest this deterioration, but the specific course of recovery actions recommended in NAOP was a difficult pill for the board to swallow.

The fundamental conclusion of the nuclear performance and assessment group was that an attempt to continue

operations of all 20 units would continue to degrade long-term safety and performance. Recovery would mean laying up, at least temporarily, seven nuclear units in order to bring the other 12 back to a high level of safety and efficiency.

#### 1540

NAOP represented a commitment that the board spent considerable time wrestling with. They had to be technically assured that the recovery plan would respond robustly to a range of circumstances and would deliver what it was targeted to do. Mr Andognini was tested on all aspects of the plan and why the plan was not just one preferred option but the necessary one.

After considerable deliberation and considerable time discussing the issues and options with Mr Andognini, the board was satisfied that the recovery plan was the appropriate action to be taken, the responsible thing to do and the only thing to do. I am sure that you will scrutinize the plan and probe Mr Andognini too, and I believe that you too will conclude that the recovery plan is the preferred course of action.

The board decided to take the first steps towards nuclear recovery. Because the NAOP spans several years, there would have to be ongoing future assessment decisions, monitoring of progress, and flexibility to respond to changes of conditions and any new discoveries.

I'll just comment on a few of the major aspects of the plan. Carl Andognini will be meeting with you on Wednesday, and John Fox and Eleanor Clitheroe will speak to you later today on both the supply issues and the financial issues.

Safety is fundamental to the recovery plan. It is true that all of our nuclear units can be operated safely today, but it is tomorrow that concerns us. Minimum acceptability is not good enough to satisfy us and I'm sure not good enough to satisfy most Ontarians. We need strong and sustainable long-term improvement in nuclear operation to give larger margins of safety, and we only have enough employees to really work out 12 units at a time. Safety is the fundamental driver of the decision to lay up seven and recover 12 units over the next two to three years. But safety won't be the only challenge. We need to preserve reliable supply, manage environmental impacts and ensure that the cost of the recovery plan is affordable.

Typically, nuclear stations produce about two thirds of Ontario's electricity needs during a period of low demand, with hydro-electric, non-utility generation and a little bit of fossil making up the balance. At periods of peak demand, nuclear still provides about half the energy, while fossil picks up the rest.

Hydro's high reliance on nuclear-generated electricity means that implementing the recovery plan will also mean a tight supply situation for meeting peak demand over the next two to three years. The loss of a third of our base load nuclear — that's about 15% of our overall generating capacity — means that fossil stations, which have usually been used for meeting intermediate and peak periods, will have to be run much harder. We'll have to run our coal units to increase capacity and return the Lennox station to

service to burn oil and gas. We believe that we can do so while still meeting environmental regulations with regard to air emissions. Conversions to natural gas and the use of more low-sulphur coal are all options we can use to support our environmental performance.

In addition, we will cut back exports and increase purchases, most of which will have to come from outside the province. Fortunately, Ontario has a robust transmission network and we anticipate that we can rely on that system to best advantage to bring power in from other sources. However, we will need to look at reducing some transmission constraints and beefing up some interconnections, for example, with Quebec. John will be talking about all of that a good deal more.

Eleanor will be talking to you about the financial aspects of this, so I will pass on the remarks I was going to make there.

The bottom line is that we believe we can meet our obligation to provide enough electricity in the province over the next few years of this plan. We won't have the sort of reserves we have had in the past.

Most of the cost that's involved in this program is driven by alternative supply. The additional fossil and the outside purchases are much more expensive than was the case when we could run our nuclear full tilt. That's really the issue that's driving the cost. Laying up seven units to save 12 is the fundamental assumption, and that's what drives most of the cost. I'm sure you will be probing us very hard on whether that is the right decision and you will be probing Mr Andognini and perhaps the rest of us on that issue today and perhaps in the future. That's the fundamental issue that you will want to become satisfied with, that it is necessary to do that.

Mr Chairman, that's the overall situation. Perhaps John could speak to us a little bit now on the supply issue.

**The Chair:** All right. Mr Fox, if you would just identify yourself for Hansard, please.

**Mr John Fox:** I am John Fox. I am the executive vice-president of the generation company at Ontario Hydro.

Thank you, Mr Chairman and committee members. Given that your focus is on what went wrong, I will perhaps save a little bit of the five minutes. The chairman has briefly given an overview of what our response plan is to the lower availability of nuclear power. I would like to address it in the near-term issues and the longer-term issues and note, as perhaps an opening comment, that the program we have put in place to ensure ongoing reliable supply to the province is done within the existing emissions guidelines that are in effect and govern our operation at this point, and have been in many ways driven by the need to respect the existing environmental expectations.

In the short term, we have made decisions to take two Lennox oil-fired units out of mothballs and that, combined with the increasing operation of other fossil fleet, we believe will provide adequate energy and capacity to meet the needs between now and the year 2000. As a contingency, we have secured options to purchase on the inter-connected market. We are dealing with the independent power providers to see to what extent additional supply

may be available within the province. We are in the process of trying to negotiate out of some of the export contracts we have to ensure that power is available for internal use.

We will be increasing our fossil operation by approximately 67 terawatt-hours. This will result in additional coal costs to us of about \$2.1 billion over the next five years. Additionally, there's approximately \$500 million total associated with the increased needs of operating the existing fossil fleet, and we anticipate a lost contribution of about \$500 million from exiting our export contracts.

We recognize that if Pickering A and Bruce A are delayed beyond the scheduled return time, the province will need additional supply. We have identified generically what type of supply that would likely be, which would be gas-fired turbines, either combined cycle or simple cycle. We have not gone beyond the planning process at this time, as how and who would build those units I think will be dictated largely by the outcome of the white paper.

If Ontario Hydro was left with the obligation to serve after industry restructuring, then we have identified a number of sites that we would construct new plant on. If, on the other hand, there is a determination that the marketplace should provide this, then of course I assume there would be a bidding process that would allow anybody in.

#### 1550

We believe that the program we have put in place in the short term ensures reliable supply. We continue to monitor obviously the performance of the nukes as well as the availability of all options. We have put an RFP out to see if there is additional supply that we are unaware of available to us, either within the province or without that would be available to us on a cost-effective basis. We will be advised by the outcome of the white paper as to what course our contingency planning will follow for the longer term.

**The Chair:** Mr Fox, before I go to Ms Clitheroe, I will remind us that we are trying to focus on what went wrong. I appreciate the concern of the chairman and of Hydro management to focus on the recovery plan and to get there as quickly as you can. To do it properly, I think this committee really would like me to bring us into focus for today's topic: What went wrong and why. Ms Clitheroe, please, if you would.

**Ms Eleanor Clitheroe:** In light of that, I'll also be very brief and just give you a summary. My name is Eleanor Clitheroe. I am executive vice-president of Ontario Hydro and the key financial officer. My intention was to give you just a few minutes on the overall impact of the situation on the financial statements of the company.

The analysis work that has been done has been based on the assumptions provided by the nuclear experts and the generation company. The work we've done has looked at a five-year impact, from 1997 to 2001, for net income and capital in a situation where Pickering A and Bruce A stations do return to service and in a situation where they do not return to service. Briefly, and I won't go into any detail here, where Pickering A and Bruce A do return to service, there would be a reduction of net income of \$5.5



billion and an increase of capital costs of \$1 billion compared to the previously planned levels of the corporation. In this situation, Hydro would in general experience negative income over the five-year period. However, although retained earnings would decline over the five years, they would remain positive over that period.

Where Pickering A and Bruce A do not return to service, the net income is reduced by about \$7.6 billion and capital costs increase by about \$1.2 billion. In this scenario, Hydro would in general experience negative income over the five-year period, and in addition, net equity becomes negative over the period due to the write-offs of the A stations.

Although the cost of the NAOP plan is significant, it can be financed from internally generated cash flows. The effect of this would be to slow down planned debt reduction. Prior to this situation, we had estimated the debt reduction would be about \$7.9 billion over that same five-year period.

In the situation where the A units return to service, the net reduction is estimated to be about \$1.6 billion. In a scenario where they do not return to service, the debt reduction is estimated to be about \$2 billion rather than the \$7.9 billion planned. In the absence of rate increases, the increased cost would result in a net loss over the next five-year period, with the result that Ontario Hydro would not meet its statutory debt retirement at legal requirements.

Under the Power Corporation Act, the Hydro board has a responsibility to set rates on bases which cover costs. These costs are deemed to include the SDR. The SDR is based on a formula in the act. Hydro board can use a rate ruling to accrue future costs and charge them to retained earnings in 1997. This would result in negative retained earnings in 1997 but would allow us to meet SDR requirements. Alternatively, Hydro board could take a rate ruling, which would exclude those costs, year over year. Either of these two approaches may be used, but the board has not made decisions around this yet and that will be coming up in the fall.

I will pause there. I had a few other remarks, but perhaps in light of the committee's focus I'll stop there and move to questions.

**The Chair:** Thank you, Ms Clitheroe. I appreciate that. Mr Farlinger, a final comment?

**Mr Farlinger:** Yes. I think I could just say a few things on your particular focus, and I'm sorry we didn't come here today with that as our focused message. The nuclear performance in this company was excellent in its early years, and we were regarded as top of the heap in world circles. The company had a performance percentage of about 85%, you say even higher, John, in the early 1980s. That deteriorated through the 1980s, and by the end of the 1980s it was 73%. In the last seven or eight years it has gone down to where we are, at 60% now, so that's an indication of the amount of time these units are running, and they're down — basically these units would run full-time. It's our base load, so it's not a question of supply and demand; it's a question of how long you can

keep the units running without putting them down. There has been a gradual deterioration over the years, with a little blip up and down a couple of times.

Why is that? The Andognini report will tell you it is management, it's the high-level and medium-level management in these plants that has let the method of operation deteriorate. There has been bad discipline with respect to the workers brought on in part by very, very difficult labour contracts, but that doesn't take the responsibility away from the management. The management have really done a bad job and there has been a bad system of communication from the nuclear company up to senior management in the company and much of what has been going on has not been communicated. We've got reports from the regulator in the last few years of issues that the company has been asked to address and the company doesn't address them. They're outstanding over periods of time, so weak, bad management at all levels in the nuclear units. That would be my capsule comment on what went wrong. It's been going wrong for a long time.

**The Chair:** Thank you, Mr Farlinger. You came full circle back into the term of reference for the committee and we'll begin by caucus. Is there a point of order you want to raise, Mr Galt?

**Mr Doug Galt (Northumberland):** No.

**The Chair:** Fine. I'll begin with the Liberal caucus and I'll move to the NDP caucus. Five minutes for caucus.

**Mr Monte Kwinter (Wilson Heights):** Thank you for those final remarks, which really hone in on some of our concerns. Mr Farlinger, in your annual report you list all the various responsibilities. You have here that the nuclear review committee and the committee will ensure that Ontario Hydro's nuclear facilities are operated and maintained in a rigorous and vigilant manner and in keeping with the best practices in the international community. The nuclear review committee met five times during 1996, including two site visits to Pickering and one site visit to Bruce. I notice that you're a member of that committee.

**Mr Farlinger:** Yes sir.

**Mr Kwinter:** As a result, you should be familiar with what is going on in that particular committee and in the nuclear area as not only the chairman but now the CEO. One of the concerns I have is that on April 16 a letter was sent to the Atomic Energy Control Board by Mr Andognini, executive vice-president and chief nuclear officer, in which he requested a renewal of the licence at Pickering, and not only suggested that 10 years might be okay but certainly five. In it he listed many things that Ontario Nuclear had done, saying that safety and operability are okay and there are qualified and trained personnel and maintenance improvements have been made. That was on April 16.

On April 17, the very next day, a report was tabled, the Independent Integrated Performance Assessment, phase 1, with the board at Hydro. This is their definition: They talk about "minimally acceptable," and in your final report virtually every operation at Ontario Nuclear was "minimally acceptable." It says:



"Performance improvement is required in virtually all attributes. Strong and immediate management involvement and corrective action is required. Nuclear safety margins may be compromised."

This is their own analysis, yet the day before, a request is being made to the regulatory body suggesting that the Pickering facility should be given a five-year license because it meets all of these standards. The next day they talk about all the things they don't do. They say there is inadequate training, there's lack of configuration management, there's inadequate maintenance, all of this in a report that is tabled, all of this that has gone to your board and has been, I assume, approved by the board, and we have this conflict.

My concern, and I assume that many of the citizens of Ontario are concerned, is that we are being asked for, and we are going to be looking at in a very short time frame, a solution to a problem that is being put forward by the people who created the problem and are saying: "Yes, we have done all of these things that are inadequate. We are wanting in the way we run this operation. But having said that, here's how we want to fix it and here's how we want to expend some of our funds."

I'd like to ask you, what kind of confidence level can we, representing the people, have when we see this report? Can you at least explain how one day you're asking for a five-year licence and the next day an internal report says the place is virtually in chaos?

1600

**Mr Farlinger:** I'll try and answer the question. First, it might better have been put to Mr Andognini, but you don't have him yet and I'm sure you will put it to him again.

Mr Andognini comes from a background in the United States, where it's normal to give 10-, 20-year or indefinite periods of time on a licence. The regulator can close up a plant any time it wants, but they're not for term periods. By the way, here the regulator can close the plant any time it wants as well.

I think it's a silly debate, sir. I think it was a silly debate for Andognini to get into. It wasn't approved by the board. He simply wrote the letter based on his own experience and wanted a five-year report. So why we're debating that I really don't know.

In our system we get a two-year licence, and we know if we don't get a two-year licence, as we did not in Pickering — we got a six-month licence, as you know, and then another nine-month licence — that's a strong message in our culture. I can't respond other than that. That is the discussion I have had with him since he did that, but I can't speak for him any more than that.

**The Chair:** The NDP caucus.

**Mr Floyd Laughren (Nickel Belt):** Mr Farlinger, it's my understanding that the Hydro board had a nuclear oversight committee. Is that correct?

**Mr Farlinger:** It has a nuclear committee, yes.

**Mr Laughren:** It has a nuclear committee. Perhaps I'm not using the right words. Was Mr Kupcis on that committee?

**Mr Farlinger:** Dr Kupcis was on all the committees as the CEO, yes.

**Mr Laughren:** Was that nuclear committee aware of the problems in the nuclear division?

**Mr Farlinger:** I can only speak to less than the last two years by personal observation, but certainly it was aware that nuclear was in trouble when I arrived and I'm sure for some time before that.

**Mr Laughren:** So the board was aware of the problems in the nuclear division?

**Mr Farlinger:** Absolutely. It took many steps to deal with them.

**Mr Laughren:** I don't want to put words in your mouth. You wouldn't allow me to do that anyway. The board, through Mr Kupcis, then asked Mr Andognini to come in and do an independent assessment. Am I correct?

**Mr Farlinger:** Correct.

**Mr Laughren:** It was a board decision to do that.

**Mr Farlinger:** That was Dr Kupcis's decision. It was endorsed by the board, yes.

**Mr Laughren:** I wondered what the level of frustration was at the board about their ability to get information about the problems in the nuclear division.

**Mr Farlinger:** I can assure you the board was pressuring Dr Kupcis to move from the recovery plan he had put in place in September to outside people because we didn't have enough confidence in the people we had.

**Mr Laughren:** I'm particularly grateful to Mr Kwinter for pursuing his line of questioning because it allows me to be briefer. The interim report to which Mr Kwinter referred came down on April 17. Would it not be normal for the Hydro board to brief its minister on a report like that?

**Mr Farlinger:** Let me go back a minute. I heard over the weekend that there was quite a fuss about this interim report. I must say I didn't see that report as anything very different from the reports we've been getting every month on nuclear for the past year and a half. I don't see that report as being anything other than a compilation of information we'd been receiving for some time and which we'd been making public for some time.

**Mr Laughren:** Were you surprised at the downgrading of the nuclear division between April and August?

**Mr Farlinger:** We're talking about April 1996 to August 1997. At least I am.

**Mr Laughren:** April 1997.

**Mr Farlinger:** April 1996 is when Pickering went down.

**Mr Laughren:** Then I'm sorry: When Mr Andognini's group brought in its interim report on the nuclear division on April 17 this year, the ratings given the nuclear division were higher than the ratings his group gave them in August. I'm wondering whether you were surprised at how rapidly the standards had deteriorated at the nuclear division.

**Mr Farlinger:** That's not my impression, sir. We had consistently —

**Mr Laughren:** It's in the reports.

**Mr Farlinger:** — bad reports from Andognini every month he was there, from January through August, with a little more meat around the bones, if I may put it that way, but I don't recall any surprises in August. The only surprise in August was what the treatment would be for the disease, not the fact that the disease existed.

**Mr Laughren:** To be fair, I don't want to beat this to death, but the rating standards that go down to minimal acceptance in A, B, C, D and E were lower in August than they were in April, and that's not a long period of time. I wondered whether you were surprised that would happen. Could I ask you another question? I suspect I'm running out of time.

**The Chair:** Very briefly.

**Mr Laughren:** What options other than shutting down the seven reactors did you consider in August?

**Mr Farlinger:** There are about six formal options. I don't have them in front of me here. I'm sorry, I really think this is a question — I don't mind you asking me the question, but I wish I had brought the material to sustain that.

**Mr Laughren:** But you understand that, as someone said, the same people who got us here have now endorsed the recovery plan and we'd like to pursue this matter.

**Mr Farlinger:** The people who were brought in to produce the recovery plan were also brought in to manage the company, so they're operating and wearing two hats in that sense. I absolutely agree with you. They're managing the operation, and at the same time, with the help of many others, producing a recovery plan.

**Mr Laughren:** Thank you.

**Mr Galt:** Mr Farlinger, I think the number one question the people of Ontario are asking has to do with the safety in the operation of these three sites. I'm sure that you feel it's safe, but what can you tell me, tell this committee to reassure the people of Ontario that the operation of these sites, continuing operation of the other 12 and taking these down and bringing them back up, operating them till we take them down, is safe? There's a lot of concern. This is really a performance issue.

**Mr Farlinger:** I can tell you that at every turn I've been told that these plants are safe. I've been told this by the regulator whom I visited with a year and a half ago. I've been told this by the regulator more recently whom I had the same discussion with. I've been told this by the Andognini group, which has assured the board at every meeting since January when they arrived that these plants are safe. In fact, I haven't heard anybody who had any real knowledge or information about them say the plants are not safe.

**Mr Galt:** They say, "...brutally honest that they're minimally acceptable," and that puts people pretty ill at ease.

**Mr Farlinger:** Absolutely.

**Mr Galt:** You're saying they are safe. The deterioration you talked about earlier — what I read in the IIPA report is that we're talking about a deterioration of the ability to manage and possibly the management-union

relationship. Is there any difficulty with the equipment, the hardware?

**Mr Farlinger:** Yes, there is some difficulty with the hardware, particularly at Bruce. At the Bruce A plants there's some difficulty right now with the hardware, but that's fixable if everything else is fixable, I suppose. Basically the problem is with the management and the method of operation.

**1610**

**Mr Galt:** You were recently appointed as chair of Ontario Hydro, and I'm sure you have all kinds of qualifications. Maybe you could tell us how you became chairman of Ontario Hydro and the qualifications you bring as the chair.

**Mr Farlinger:** In my former life I was the chairman of Ernst and Young, an accounting consulting firm, which doesn't give me any particular credentials for the electricity business, other than general management experience. When I retired from Ernst and Young, Maurice Strong asked me to do a couple of studies on the industry and I spent about half my time for two years working with Ontario Hydro, so I got to know the people and the industry in a way that I thought probably qualified me well for the chairman's job. I don't pretend to be qualified to be the CEO of this company. I just happen to be that for the time being.

**Mr Galt:** In the IIPA report, they talk so much about human resources and the problems there. Why did we deteriorate into this kind of a position in human resources? You talked about going down to 73% at the end of the 1980s and by now it's down to 60%. I gather from this report it mostly relates to human resources, inner human relations within the organization, management. They first talk about being authoritarian and then they contradict that. They talk about a problem dealing with a union that has ended up with extremely strong negotiated positions. How did we end up in this position, mainly because of people?

**Mr Farlinger:** It's not unusual for this sort of thing to happen in the nuclear units, the utilities in the United States, I'm told. The nuclear part of the business seems to operate unto itself and the culture has deteriorated in a number of plants there. Andognini tells me that our cultural problems and management problems are no surprise. There are many examples of like this. Why does that happen? I'm not sure.

**The Chair:** May I make a suggestion to the committee? We're moving well and I think that's appropriate. Would it be helpful for the committee if we extended the time for each caucus to 10 minutes rather than staying on the tight five minutes? Would that be helpful for you?

**Mr Sean G. Conway (Renfrew North):** Yes.

**The Chair:** Fine. Then we'll begin now as we start the rotation again, and back to the Liberal caucus.

**Mr Kwinter:** Mr Farlinger, I'd like to pursue my earlier questioning. I just want to question you about a statement you made that nowhere has anyone questioned the safety at any of the nuclear facilities.



My concern is that in this interim report, by their own gradation system, they have ranked the nuclear facilities as an E, which is minimally acceptable, and part of that grading says, "Nuclear safety margins may be compromised." I know in the nuclear world they may feel: "That's okay. They may be compromised, but on the other hand they may not be." But I can tell you that if I was a resident at Darlington, Pickering or up in the Bruce, and I was told I was living next to a facility that has a nuclear safety margin that may be compromised, I would be very concerned that a facility ranked as one of the top in the world is tolerating a particular situation where safety margins may be compromised, and I can't say that strongly enough.

This is something that in other jurisdictions and other areas leads up to a Chernobyl. I don't want to be overly dramatic, but we have a situation where there are five grades they could have assigned to that nuclear facility and they gave it the lowest. I shouldn't say the lowest; I'm sorry, there's one more: It's "indeterminate." But of any one that really has a definition, it was ranked by these experts as being the lowest other than "indeterminate."

The concern I have is that these reports have been forthcoming. Today we heard from the minister when he said he hadn't seen the report, but if he had seen it, he wouldn't have done anything about it anyway. You say to yourself: "Who's in control? Who is determining public safety, particularly in an area where the potential harm is staggering?" It seems to me there's almost a cavalier attitude: "Well, you know, this is way we do it. Don't be too concerned because we're not terribly concerned about it."

I'm concerned. I'm concerned as a citizen, I'm concerned as a legislator that somewhere along the line you would expect that Ontario Hydro, the largest public utility in North America, would be at the top of the list. When you consider the amount of investment that has gone into it, when you consider that it's a publicly backed institution, you would think that perfection is acceptable and nothing less. Here we have a situation where it is considerably less and there seems to be an attitude, "Well, no one should be terribly concerned about it." What's your reaction to that?

**Mr Farlinger:** No, Mr Kwinter. You're right up until you say that. You're absolutely wrong if you're suggesting nobody's concerned about it. The board is enormously concerned about it. That's why they brought in these outside experts to take over the company. We've taken action because we didn't believe the people who were running the thing were doing the job, so we brought in new people.

**Mr Conway:** I'd like to begin a series of questions to the panel. Mr Farlinger, you indicated to Dr Galt that you had been asked by Maurice Strong to join a Hydro study team. Can you repeat at what point Mr Strong asked you to do that and what those responsibilities were?

**Mr Farlinger:** Let me get the date right. In November or December 1993 he formed a group of four or five people whom he wanted to use as advisers, which group was

only supposed to meet — this is a little bit of a long story; not too long, I hope — with him about every two or three months, a varied group of business people. Eleanor had just joined the company as the VP finance and she and Maurice met with this group. After the first meeting, he asked me if I would like to work with Eleanor and a group of outside investment bankers and lawyers and so on and do a review of the industry, what was happening in North America etc, and we did a report about eight months later.

Then subsequently he wanted an independent report that didn't include any company people, so he asked me and two others to make a more exhaustive report along the same lines. It sort of went from being on this part-time group that met every few months to about a half-time job.

**Mr Conway:** So I'm correct in understanding that it was in the fall of 1993 that the then chairman of Ontario Hydro, Maurice Strong, asked you to join an advisory group and —

**Mr Farlinger:** Correct.

**Mr Conway:** — you have had a varying degree of involvement with Ontario Hydro ever since, assuming the chairmanship on — the announcement of your appointment as chair was, I think, made by the Premier's office in November 1995.

**Mr Farlinger:** Correct.

**Mr Conway:** What I'm trying to establish is that you have been around Ontario Hydro at the senior levels as chairman for two years approximately and in an advisory capacity in varying degrees since about the fall of 1993.

**Mr Farlinger:** I wouldn't say an advisory capacity. What I was doing was writing reports on what was going on in the industry and what should go on in the industry.

1620

**Mr Conway:** The reason I want to deal with this chronology is that it was about that same time, the fall of 1993, that the federal regulator of Ontario's nuclear power reactors, the Atomic Energy Control Board, begins a series of very critical analyses of the deterioration at various of the Ontario Hydro nuclear power stations. As I recall, you became chair of Ontario Hydro some time late in the fall of 1995. In the following year, I believe it was December 1996, the federal regulator takes an unprecedented step in your business, that is the nuclear business. You're now chairman of Ontario Hydro. We're talking about December 1996. The federal regulator in an unprecedented move restricts the licence renewal of Pickering to six months because they are very worried about the deteriorating operational standards at Pickering and the inability of management to do anything about it.

At about the same time, December 1996, Dr Kupcis, responding to those concerns identified by the AECB, launches what we now know as the IIPA. Four months later in April 1997 — this is now 16 to 18 months after you've become chair of an organization that is largely a nuclear utility — we have, as my friend Kwinter observed 15 minutes ago, a remarkable spectacle. We have two incidents a day apart. We have Hydro going before the federal regulator that just four months before, in an unprecedented slap of the wrist and raise of public alarm,



giving only a six-month renewal to Pickering — Ontario Hydro has the chutzpah, the nerve to go before that self same regulator and say, "Give us a five-year renewal," for a plant that we find out the very next day your senior managers, Mr Farlinger, are confessing within Ontario Hydro is failing in more ways than have ever been made public. This, 17 months after you've become chair. What I want to know is something about the cult of senior management in the president's office and in the chair's office during those 17 months while you were the top dog. What was going on?

**Mr Farlinger:** I'll tell you what was going on. As I have said, the board was recognizing we had a serious problem. That was quite evident by April 1996 when Pickering went down. You don't have all these units go down and not come back up when promised unless you've got serious trouble. So we pressed on the senior management and replaced three of the senior managers in the units. There was a plan for nuclear recovery developed by the president and it looked like that was going to do something.

In July, at this very same time, the president and I went to see the chairman of the AECB. We had discussions about what we were doing. They seemed to think we were on the right track. We thought we were for a while, and then, as I've said, we thought this wasn't going to do the job and the board then discussed with the CEO, "We need some outside help." We went to get outside help. And if you think the outside help we got took a long time to report, I think you were alluding to that, so did we, but they have a particular process they go through. This is a very, very major thing and it took them six or seven months to get the solution on the table.

**Mr Conway:** That's not my principal problem.

**The Chair:** We'll come back to that. Third party question.

**Mr Laughren:** I think, Mr Farlinger, you can perhaps detect a sense of incredulity, if not suspended belief, of the committee members about what's happened at Hydro because it is truly bothersome that events have transpired the way they have, particularly the chronology of events in which you get, as my friend Mr Conway pointed out, the six-month licence approval, and then a request from Mr Andognini for five years, and in that same letter implying that 10 years would be better.

I just have trouble comprehending that a man in his position would do that and then four months later recommend that seven reactors be shut down. Being right there in the centre of it all perhaps you wonder why we have this sense among ourselves, but I can tell you, and I don't think — I don't want to speak for anybody else on the committee — it's based on party politics at all. It's a sense of, what the hell's going on at Hydro?

When I read the report, and you might expect me to feel some sympathy for the workers, given who I am, but then to see blame placed on the workers and their union contract that had been negotiated with management, the whole thing looked to me like it was not written on this planet. I

really am taken aback by what I hear and I'm not reassured at all by what I hear, I must say.

I want to ask in another round about the statutory debt retirement because I know how good Ms Clitheroe is in translating legalise into lay language and I want to ask her about that, but I really want to know what happened when Mr Andognini's report came down and was presented to the board, when it was actually presented to the board, when the board wrestled with the contents, with the report, and who it was that said, "We've got to have an immediate response on a recovery plan." I couldn't figure that out either, why you needed this immediate response — why many of us are sceptical about the recovery plan; I speak for myself, I hasten to add, but very sceptical about that recovery plan. It was done with apparent undue haste. I don't know that's for sure, so I really would like to know about the timing that report was given to the board, and who it was that said, "We've got to act immediately on this," and to what extent — I almost hate to use this term — there was the creation of a sense of crisis around the development of the recovery plan and what purpose that served. I really am concerned about that and I would appreciate your response.

**Mr Farlinger:** The last part first: Mr Kwinter says he's worried about safety. We're all worried about safety. I don't think you'd expect us to sit around when we really had a plan and not start making the place safer. So is it important to get moving? Absolutely. Now as to the issue of it taking us a while to get our head around this and get it fixed, it's absolutely true, it did. It took us 18 months to undo 10 years of bad work, so it did take us some time. We had a false start on trying to fix it internally by getting rid of the leadership and changing the leadership, and the changes didn't work. That's why we brought in the other people. As to scepticism about the need to put down seven units in order to fix 12, there was very healthy scepticism about that by the senior management, I'm sure, including the people sitting beside me. They can speak for themselves.

### 1630

Certainly at the board level, the first meeting we had, it wasn't accepted by many of the board members. They said they would receive the report and accept it in principle and come back to us with more reviews. We hired the outside auditors to review the numbers and the principles. We spent a couple of days at the next board meeting going through all this material again. We've had ongoing due diligence on it. Of course each part of the plan will have to be approved each board meeting as we move on down the road, so it may change. You may come up with some ideas that show us a better road ahead than the one we have plotted, and we're prepared to listen to that. And other events may come along. We may have to change the plan again. We don't know. So this plan is not carved in stone. It's the best plan we can see for the company at the moment.

**Mr Laughren:** Could you respond to the questions about when the report was given to the board and when

they responded with what's now known as the recovery plan?

**Mr Farlinger:** The board, of course, had been receiving reports from Andognini every month since he was there. We have monthly meetings and the board had been receiving monthly — so the fact that we had real trouble was not a surprise; the nature of the trouble was not a surprise. The nature of the fix was a surprise. The board had the plan sent to them a week before the board meeting, and then we had the board meeting —

**Mr Laughren:** That was in August?

**Mr Farlinger:** That was in August. As I say, the plan was approved in principle, but the due diligence has been ongoing since that time, with outside help.

**Mr Laughren:** I hope you'll forgive my scepticism. You talk about the need to move quickly because of the questions of safety raised by Mr Kwinter, but the interim report in April also raised concerns, as well as the AECB raising the concerns, yet suddenly in August was when you decided to lay up the reactors.

**Mr Farlinger:** Mr Chairman, if I gave the impression that the company was doing nothing about any safety concerns along the road, I'm sorry, because every safety issue that Andognini and his group came up with as we were walking down the road through February, March, April and May was attended to. We weren't waiting until August to attend to any issues that came to their attention.

**Mrs Barbara Fisher (Bruce):** I'd like to address about three issues as they relate to staffing; as they relate to capital investment required to repair — not to talk about the plan of repair but dollars instead; as well as the economic impact to areas that Ontario Hydro seems to have overlooked in its review and coming up with its plan for recovery.

Starting with the staffing issue, I appreciate, Mr Farlinger, that you weren't there maybe in the past when some decisions were made that saw Ontario Hydro redeploy or lay off — in other words, basically buy out — a number of employees. I concur with Mr Laughren's statement. I don't want to get into politics in terms of political sides, but we have to make sure that this time through we get it right. I think those kinds of questions need to be reviewed when making sure that the plan that's put forward before us now is right.

I understand that between 1992 and 1995 there was a layoff pattern of about 10,000 Ontario Hydro employees, many of them on buyout packages. I know there was a rule set at that time that said, "Once you take the package, regardless of your seniority within the company, you no longer can become an employee of Ontario Hydro again." It would seem to me that if we're in a shortfall of employees today, somebody should be revisiting that pool of expertise that might still be there and be interested in putting that expertise back to work again.

I personally believe that maybe we're taking a wrong approach with regard to using the staffing issue as an excuse for not bringing up some of the corrective works to the nuclear stations today as opposed to bringing up thermal burners and putting in millions of dollars' worth of

scrubbers and those types of things in an energy production that's not environmentally acceptable.

I also know for a fact that a week ago there was a CNA conference locally, at which time there was a disclosure that because of the success of the rehabilitation of the British nuclear system, there is a pool of workers available of whom many would be happy to be working again in the nuclear field, perhaps in Canada. I just wonder if those things were brought into consideration. Instead of spending millions into bringing up things that Hydro in the past had made a good decision, in my opinion, not to invest in any further, why are we not considering those people out there?

**Mr Farlinger:** That's a good idea about bringing back some people who took packages. We have done some of that and we're willing to do that. That's a change in the company's strategy.

**Mrs Fisher:** I appreciate it would be, and I understand why it might have been passed over easily because of these packages and the commitment not to return them to the workforce. But there are hundreds of millions of dollars invested in some very junior people, three-, four- and five-year people, who today would be very valuable to substantiate the requirements in staffing under the AECB licensing process. I don't know how we can address that. Maybe we could see how that was reviewed in the decision, before the decision was made.

I would like to talk a little bit about the timeliness and soundness of the board decision as well. I can see in reviewing the IIPA report that there are many things in there that are very sound and absolutely have to be dealt with for safety requirements. There's no argument from anywhere, it seems, on that issue. My question would be with regard to the options of what was reviewed before those decisions were made.

My understanding is that that board report goes to the board about a week ahead. When I finally got a copy of it, it's about 16 volumes high. I ask the question: I guess all options were discussed; other than dollars, what might happen to a community, for example, if a certain four units were brought up preceding another four, or the severity of a shutdown process, like a dry layup or a wet layup, as it relates to Bruce A and the timeliness of its recovery versus that of Pickering. I don't know how we could get to understand better in the public on what basis those decisions were made. Could you help me out there a bit?

**Mr Farlinger:** Mr Andognini will be bringing the six options that were considered. I guess he could bring that in written form first. We can table that with you in anticipation of his visit and you can question him on it.

**Mrs Fisher:** That would be excellent.

Another area I want to talk about a little here is our commitment to the people and businesses of Ontario, residential consumers as well as industry and commercial bases, with regard to the rate freeze. I think we have all recognized that in the open field of competition and the convergence of other forms of energy, not only forms of energy but from other sources, the rate becomes a significant issue as to whether or not you retain business in



Ontario. With the government's goal of maintaining a rate freeze — I guess this is directed to Ms Clitheroe. To make this plan as it's presented today be successful, how would we ensure that there wouldn't be a rate increase?

**Ms Clitheroe:** There are a couple of options which the board can pursue, and those are going to be considered over the fall. The way the Power Corporation Act operates is that the company must plan to meet what's called SDR, the statutory debt retirement provision. If the plan looks like it cannot meet that, the options are to raise rates or exclude certain costs from the calculation of rates. The question the board will be considering, given government policy around the rate freeze, is the option either to exclude, up front or year over year, the costs as they are incurred from the rate base, or they have the option of capitalizing some of those costs and amortizing them over an appropriate period of time. We've discussed those options with counsel and with our external auditors to determine whether all these options are available to the board; they are, so it's a question of bringing them forward to the board for their review later this fall, probably in November.

**Mrs Fisher:** Last week we had the opportunity to have the Ministry of Energy give us an overview of the corporate operation and structure of Ontario Hydro. I'm pretty familiar with the fact that onsite at each of the three locations when we're talking nuclear, and I'm sure with the others as well, the budgets are created onsite and they go through certain site approval levels and then they finally get to head office, commonly known as the 19th floor.

I am familiar with the fact that in the past, proposals, which I've been exposed to in detail, have been put forward from site management that made a heck of a lot of sense, yet I can see where those decisions weren't accepted by the corporate level onsite level, the highest management levels, up into the corporate office. I appreciate that you have to do a global budget for Ontario Hydro, but we pay people a lot of money to be onsite and manage as well.

**1640**

In the future program, is there any anticipation that there might be some independent thinking and decision-making being allowed on a financial basis at the sites, where if they work their little heads off out there and it seems to be a reasonable and viable proposal, their brain power is supported?

I hate to sound a little bit negative on this, but I can tell you that my experience has been, representing our community in a different number of capacities for 20 years, fully attached to Hydro, that it almost is like, "Do your work and then park your brain and hope it works." I feel very sorry for the employees, to feel that. In fairness to them, I want to say that perhaps that culture was not something they wanted to be in; I think it was something that was created. I just want to know, are we going to look forward to a bit more site determination and site decision-making when it comes to making sure that their finances are in order so they're self-sustaining?

**Ms Clitheroe:** You might want to address the question to Mr Andognini when he comes, but let me give you my perspective on it from corporate finance's point of view.

The board, in approving the general direction of the nuclear program, the asset optimization program, has taken that program as the planning base for looking at the next three-year plan, especially the 1998 budgets. Those will be under the responsibility, obviously, of Mr Andognini as they come forward for proposal. Each of those specific programs inside, whether they be capital or large programs of another nature, such as training and so on, will come forward to the board under the auspices of that plan for individual approval at the appropriate time for implementation.

It's my understanding, and this is where I suggest you ask Mr Andognini, that when they were looking at the assessment of the IIPA and creating the asset optimization plan for the nuclear assets, it was not only the external experts who were providing input into the program, although obviously they were very heavily influenced by them, but they also met with all the management and with workers across the whole nuclear operation to get their ideas, to get their concerns and to build those into the program and into the remedial programs that they felt were required. I think there is a combination of views there and that process of obtaining views within the corporation and marrying them with the external experts' views is in progress. I think you'll see that continue over the 1998 planning program.

**The Chair:** Mr Farlinger, just as an aside, what credential is given by the board to the Andognini report?

**Mr Farlinger:** The board has received the report and approved it, subject to ongoing financial review and approvals as we go along.

**Mr Conway:** I want to come back to what went wrong and what you, Mr Farlinger, you, Mr Fox, and you, Ms Clitheroe, but most especially you, Mr Farlinger — you're the big cheese. You're not only the current chairman but you're the acting CEO.

The difficulty I have is that the so-called Andognini report, the IIPA, which was released with much fanfare by you in August of this past summer, has nothing qualitatively in it that the Atomic Energy Control Board has not been saying for three years. My problem is that Andognini in August 1997 basically confirms or underlines most of the major criticisms that the federal regulator had been making for at least three years. In that sense, there was no breaking news in the Andognini report, particularly if one compared it to about three years of ongoing critical analysis by the federal regulator, a rather important person in this equation. That's where I'm coming from on this.

Having said that, I want to ask you, Mr Farlinger, and your colleagues can comment, is there anybody on that panel sitting before me who would disagree with my assessment that that unprecedented action taken by the federal regulator, the Atomic Energy Control Board, in December 1996, namely, giving only a six-month renewal for the licence at the Pickering generating station — that that unprecedented, very short-term renewal of the Pick-



ering generating station licence was a very significant development in the atomic industry in this province and country? Does anybody up there disagree with me about that assessment?

**Mr Farlinger:** My associates can speak for themselves. I think it was an inevitable thing for them to say after the April 1996 issue, earlier than that, when this whole plant went down and couldn't get back up. That, to me, was the epic issue in this play, not the fact that five months later the licence only had a six-month renewal. I would have thought that was inevitable. I think the big signal was Pickering going down in April 1996.

**Mr Conway:** I find that absolutely breathtaking. Your attitude, Mr Farlinger, to the federal regulator is quite breathtaking. I can't imagine that you'd have that attitude to Standard and Poor's or Moody's. Regular folks would think that in this highly charged, very controversial industry, when the federal regulator in December 1996 stands up for the first time in the history of Ontario and says, "We are so concerned that we will, for the first time, only grant a six-month extension" — you just create the impression, as chairman of Ontario Hydro, I might add, that this was inevitable, that it was no great —

**Mr Farlinger:** No, that isn't what I said.

**Mr Conway:** You'd better be more clear, then, as to what you really felt when they did that.

**Mr Farlinger:** I'll do my best, Mr Conway. What I'm saying is that after April 1996 everybody who knew anything about this company knew it was in trouble. The fact that the regulator then, when the licence came up, six months later gave it a six-month renewal was a rather logical thing for them to do. I'm not detracting from their having done it, I'm simply saying that the issue was that the company proved to everybody that it was in big trouble when it couldn't get its nuclear units back up.

**Mr Conway:** Can you explain what kind of renegade operation you were running that allowed somebody four months later, in April 1997, to go before that same regulator and say, "Give us a five-year, maybe even a 10-year, extension"? On whose authority was that person acting?

**Mr Farlinger:** He did it on his own authority, as far as I know. He certainly didn't come to the board to ask for that.

**Mr Conway:** Are you serious?

**Mr Farlinger:** I'm just repeating myself. I said this after Mr Kwinter asked me.

**Mr Conway:** This committee and the people of Ontario need to know that four months after the federal regulator rang that alarm bell, you were running a corporation that allowed somebody to go back to the regulator and say, "Give us a five-year extension," for a generating station that, we find out, the very next day you are telling everybody inside the corporation has more problems than perhaps even the regulator understands.

How much do we pay you to be chairman of Ontario Hydro, Mr Farlinger?

**Mr Farlinger:** You pay me \$250,000 to be chairman of Ontario Hydro.

**Mr Conway:** Most people would think that's a pretty good salary. You bring very excellent credentials to the job. You're from Ernst and Young. It just seems incredible. Why shouldn't the taxpayers order your firing for allowing two things: for allowing the AECB alarms to go unresponded to for so many months before you took any action —

**Mr Farlinger:** Pardon me, that is wrong. I didn't let them go unminded at all. I've been working ever since I got in this company to fix this mess.

**Mr Conway:** The federal regulator gave you a very sharp rebuke in December over one of your biggest operations, and four months later your agents were before that regulator saying all was well and, "Give us a five-year extension."

**Mr Farlinger:** I explained that to you as best I know. Mr Andognini comes from a different environment and he asked this question in a way that related to his past experience. You'll have to talk to him about it.

1650

**Mr Conway:** I'm talking to you because you're the chairman and the acting CEO.

**Mr Farlinger:** You can talk to me about it, but I — I asked Andognini why he did this afterwards. He told me that it shouldn't be this way, it should be a complete open licence, but he'd asked for five years.

**Mr Conway:** You see, you've got a real credibility problem with many people, and I'm sensitive to the difficult situation in which you find yourself. This is not all of your making. That has been said, and I agree.

But I just look at the way in which in the last 18 months information has been handled by this corporation, and we'll be discussing later — I mean, we found out in the last six months that the poor old minister appears to be told little or nothing. Norm Sterling in all of this is rather like one of those referees in a professional wrestling match, where while the villain is gouging out the good guy's eyes, the minister is distracted by some irrelevance in the upper tier. We know the minister knows nothing and has almost been proud about his boast.

You never felt, apparently, in the last six or eight months that it was worth your while to tell the minister responsible for Ontario Hydro that Andognini was doing these things in April, that there were a variety of other problems, of which ignorance the minister has now confessed. We've had the minister stand up in the House and tell us for weeks and months now he wasn't informed about the heavy water releases, the tritium problem. Not only was the minister not told, but people out in Durham region weren't told. We're here to try to get some answers as to what's going on.

I am continuing to struggle with a situation where we've had in 1993, 1994, 1995 and 1996 clear, consistent criticisms from the federal regulator, culminating with that unprecedented decision in December 1996. Then we get two things: We get a six-month extension for Pickering and we get the Andognini IIPA launched. That's understandable.

What is remarkable and unbelievable to me is that then in the next six months we get three things. We get Andognini or his agent going up to the federal regulator and saying: "Not to worry. We are now ready for a five-year, maybe a 10-year extension on Pickering GS." The very next day, as my friend Kwinter has indicated, a very different story is being told.

Then, perhaps most remarkable of all, in August of this summer we have you as the chairman of Ontario Hydro releasing this report, which in terms of information says nothing that the federal regulator has not been saying for three years. Then two things happen. You go out of your way to say, "The real problem, one of the big problems, is Ontario Hydro nuclear is run by a cult sort of out of control and my pal Kupcis, the president, has accepted responsibility and has walked off into the sunset."

The problem I have with that is that the IIPA tells us nothing that we haven't known for three years. So why didn't people like Bill Farlinger and John Fox do more than they appear to have done and why shouldn't Bill Farlinger and John Fox go the way of Al Kupcis? It doesn't seem to me that you have met the test of responsibility and accountability here. I would cite that remarkable performance by Andognini in April of this year as in itself just cause for very serious retribution visited upon you as the chairman of this board.

**Mr Farlinger:** Is there a question that you asked in all that?

**Mr Conway:** Yes. Why shouldn't you be fired for failure to exercise an appropriate level of duty and responsibility?

**Mr Farlinger:** I don't think the five-year request is a big deal, so that's a difference between you and I. I think it's a minor peccadillo if someone comes from a different tradition and made a request.

**Mr Conway:** You think it's a minor peccadillo to have a senior Hydro executive on one day go before the federal regulator and say, "Give us a five- or 10-year extension," on a big nuclear power plant, and on the very next day confess that there are a whole series of problems that would be of material interest to that issue, to say nothing of their interest to the people in Durham region, southern Ontario and the province as a whole. You think that's just a peccadillo.

**Mr Farlinger:** Not everything you've said is a peccadillo.

**Mr Conway:** Help me understand what's peccadillo and what —

**Mr Farlinger:** The five-year licence request in my opinion is a peccadillo.

**The Chair:** I want Mr Farlinger to be able to complete his response and then we'll go to the third party.

**Mr Farlinger:** It's the third time I've responded to the same question, Mr Chairman.

Mr Andognini comes from a different environment where long-term licences are given and it doesn't affect the regulator's action in any way. He can lean on or close up the operation any time he likes. He made that request. Why would he make that in our environment? You better

ask him. That's all I can say. I don't think it's a cause for dismissing Mr Andognini.

**Mr Conway:** It wasn't Mr Andognini's dismissal I was recommending.

**Ms Marilyn Churley (Riverdale):** Mr Farlinger, I attended the press conference and I will not repeat particularly what my good friend Mr Conway has said here, but I want to impress upon you that the questions so far do focus on the biggest problems in terms of credibility that I think most members of the committee feel.

When I attended that press conference, I came away shaking my head in wonder and so did many others. What was this about? It almost felt like — and I'm not the only one who said it. This is a strange atmosphere. It almost feels like they are trying to create an aura, a feeling of crises, and particularly on top of the fact, as my colleagues have been saying, there wasn't a whole lot new said at that press conference except for the very in-depth, cost-factored solution, recovery plan. So we are trying to get to the bottom of what really went on there.

I heard you say at the press conference and again today that there were 10 years of, as you put it in the press conference, the nuclear cult at Ontario Hydro. But I find it interesting that our concerns about Ontario Hydro, as you may remember, we learned about before your press conference, about the copper and zinc leaking out of your steam condensers at Pickering A. This had been apparently going on for 20 years. I would like to know, if that had been kept secret, under wraps — some people believe there was a deliberate coverup — for 20 years with now all three governments in power, I would like to ask you, and I've never satisfied with the answer on that: Did the board know about it? At what point was it reported to the ministry and to the public? And why did it take so long?

**Mr Farlinger:** First, I can tell you that in my time on the board we did not know about it until it was discovered. I believe you're right in saying it had been going on for 20 years. It has to do with the way the water flushes against the tubes, and the copper that lines the tubes ends up in the lake. What was the rest of your question?

**Ms Churley:** My question was, I know what the physical problem is, but this had been kept under wraps. Let me frame it another way. Do you believe that there was on some level a deliberate coverup of that situation?

**Mr Farlinger:** I don't believe that, but it could be.

**Ms Churley:** It could be?

**Mr Farlinger:** It had to be known to somebody.

**Ms Churley:** I just want to emphasize again that we're talking about a situation here within that division that had been kept from the public and the different governments for 20 years.

I want to come to one other issue, and that is not about the past but is about the future, because in your presentations you all talked about where we go from here, and we'll be getting more into that. But what I want to talk about is a burning environmental question, if I may say, and you did mention you believe you can meet existing environmental expectations. I would say, given the latest acid rain report which was just released — and as you



know, in the past Hydro was one of the bigger generators of acid rain and played a major part in the previous air emission reductions. Now obviously governments are going to have to very quickly tackle that problem again.

So my question is in terms of your comments that you believe you can meet present environmental expectations, I believe you said. I believe they're going to have to be changed and there will be even fewer emissions allowable. I'm wondering if you could comment on that and whether that now will be taken into consideration as you fire up the fossil fuel plants.

**1700**

**Mr Farlinger:** I think John is probably more equipped to deal with that than I am.

**The Chair:** Can I just break in for a moment and remind us we are still focusing on what went wrong? I can appreciate the concern of Ms Churley wanting to get at some of the implications and impacts of some of the recovery plan protocols, but if you can just keep your comments fairly brief because we will be, I'm sure, coming back to that issue, Ms Churley.

**Ms Churley:** Mr Chair, just in response to that, and I respect the will of the committee here, but this was an issue that was talked about repeatedly in the presentations, and this particular new information was not, and so it can be very brief, but I'd like to know the answer. I believe that's what you said: He should keep it very brief.

**The Chair:** If I did —

**Ms Churley:** You did.

**The Chair:** — you may not like my interpretation of brief, but let me suggest, Mr Fox, you keep it very tight because the committee is at pains to make sure it really does examine what went wrong. So please respond and then we'll come back to that question, Ms Churley, when we get into the second phase.

**Mr Fox:** To the extent that there are changes promulgated in the environmental limits, we will obviously do our best to comply with them.

**Ms Churley:** Are we therefore then allowed to ask questions about the economics of the —

**The Chair:** Of what went wrong.

**Ms Churley:** Of what went wrong, as opposed to —

**The Chair:** Of what went wrong and why. You are at total liberty to have a go at it.

**Ms Churley:** Perhaps I will give permission to my learned friend here to — no, no, you go ahead.

**Mr Laughren:** I wanted to pursue the question of accountability at Hydro. I'm wondering how you decide when you're going to tell the minister something. Who makes that determination?

**Mr Farlinger:** I guess it depends on the minister. I've had two ministers. There is a protocol where we send a report to the minister after every board meeting, giving him the highlights. That was true with both ministers. The first minister I had, we had regular meetings. I think it was every two weeks, so we covered the waterfront of whatever was going on. With this minister, he suspended the regular meetings or he didn't want regular meetings, but he calls me or I call him on any issue that I think should be

communicated to the government. There's a lot of discretion in that as to what you should communicate and what you might not. We have had a few meetings on some of these issues, but mostly it's ad hoc.

Now there is a protocol in the company that certain issues are communicated routinely with the minister, and of course we have the deputy minister on the board. The deputy minister is a non-voting member of the board and attends all the board meetings. So those are the methods of communication.

**Mr Laughren:** The reason I ask is that I have some empathy with ministers who get hung out to dry and —

**Mrs Helen Johns (Huron):** Why would that be?

**Mr Farlinger:** They're like chairmen.

**Mr Laughren:** Never by our deputies, of course, but by a lot of other people.

It was made clear to us the other day on the committee that basically the ministry has no statutory authority, virtually none, over Ontario Hydro. I don't know of politicians of any political party who haven't resented that. Whether they would admit it to you today or not, I don't know, but there is a sense that Ontario Hydro has its own agenda and is a government unto itself.

I'm surprised that there haven't been these regular meetings. I'm not blaming you for Mr Sterling not wanting to have regular meetings but, for example, when the interim report of Mr Andognini came in, was that presented to the board in April?

**Mr Farlinger:** We were getting reports from Andognini every month, and this so-called interim report that everybody seems to be focusing on at the moment I would be confident would have been placed at the board.

**Ms Clitheroe:** My recollection of that is that Mr Andognini did read a summary of his findings midway through to the board. I cannot remember if the deputy minister would have been there, but my recollection is that she was.

**Mr Laughren:** Mr Farlinger, you're somewhat dismissive of our preoccupation with the interim report in your tone, but believe me, I find it offensive that a report would come down in April which indicated the problems that were clearly there in the nuclear division, and yet nothing was done then, and then presumably it went to the board. I take the minister at his word. I think he's an honourable person. He didn't know anything about it, and I wonder why. Why wouldn't that be something that the chair would say or the CEO would say, "For heaven's sake, this has got to be given to the minister," because that's the person who ends up out there having to explain your behaviour and the behaviour of the rest of Hydro?

**Mr Farlinger:** This interim report was one of a succession of reports that we were getting from Andognini every month. What it did was sort of say, "Here's the situation up until now." I didn't and I don't attach very much importance to it. All the reports we got from Andognini were that there was big trouble. We knew there was big trouble. That's why we brought Andognini in. So I didn't see that as a pivotal point in anything. What was

pivotal was when we got the final report that the corrective action was so dramatic that we had to take.

**Mr Laughren:** Okay.

**Mrs Johns:** I just have some questions of Mr Fox because I'm interested in the reactors in the past and how they have fared, I guess, and how they have come to this point where they have some problems. I know you've been there since 1990 and you may have information that goes back further than that, Mr Fox, but can you tell me, for example, how each of the nuclear plants has — when it's been up, how long it's been down, those kinds of things, over the time frame we're talking about?

**Mr Fox:** I'm not sure that these questions aren't better directed to Mr Andognini. I'm not sure what the source of your information is. I've been at Hydro since 1993 and have not had responsibility for the nuclear plant operations.

**Mrs Johns:** Okay.

**Mr Fox:** As a general comment, in my tenure there we have seen a gradual but consistent erosion of nuclear output which has caused us to take other decisions on the other generation sources, primarily the fossil fleet, to accommodate the low performance. To the extent I think you want to pursue specifics on reactors, your best bet is to talk to Carl.

**Mrs Johns:** Can you let him know I'm going to be asking that question so I can get some data and he can have the data ready when he comes in here, please?

**Mr Fox:** Yes.

**Mrs Johns:** I'll leave that then and I'll just talk about some of the documentation that we have received from Hydro over the weekend.

I'm interested, first of all, in the human resource issue. Last week, when the Ministry of Environment and Energy was here, they talked about the human resource committee that's part of the board. At that point they talked about a number of people being on that human resource committee and their ability to make human resource decisions. I guess my concern, since most of Carl Andognini's report talks about human resources and the depletion of human resources and the human resources not being there, is, what's the correlation between the human resource committee at the board level and the everyday human resources that happen in the nuclear facilities, for example?

**Mr Farlinger:** Only in terms of statistics and watching brief and so on. The human resources hands-on role is in dealing with executive compensation. That's where its real approval procedure comes in: The human resources, specifically in the various business units, are subject to the budget approvals and the overall approvals the board bring to it but not into detail.

**Mrs Johns:** Would packages for making your human resource staff smaller be reviewed?

**Mr Farlinger:** Okay, that would be, because that was a major issue. That's before my time, and John's and Eleanor's. But obviously that would have been approved by that group at that time.

1710

**Mrs Johns:** I was interested when you said earlier, Mr Farlinger, that if the committee or further work from Ontario Hydro came up with alternative solutions to the recovery plan you are now dealing with, you would be prepared to look at those and maybe change your direction. Did I hear you right when you said that?

**Mr Farlinger:** Absolutely.

**Mrs Johns:** Can you tell me, when you issued the RFP process last week about alternative energy sources, have you made inquiries into alternative energy sources throughout Ontario, and do you know there is capacity there to meet our needs in the future?

**Mr Farlinger:** You now are asking a question that's in John Fox's department.

**Mrs Johns:** Thank you for putting me on the right side.

**Mr Fox:** We are aware there may be some additional Ontario-based generation available to us. We are uncertain whether it is available to us at a price that is lower than that of the marginal cost of running our own units. That's what that RFP is out there to do. If there is a more economic way to meet the needs, we want to know it, and so we've put the RFP out to see if we can attract additional supply.

**Mrs Johns:** I have received a fair amount of documentation from people outside the industry, as you might well gather, as I think all the select committee members have, and one of the pieces of documentation I've received quite a few times is the evolving role of nuclear power in the electricity or energy supply that will happen in the future. For example, I've read a couple of documents that talked about nuclear power taking a lesser role as we proceed into, let's say, 2020 or 2030. Does Ontario Hydro have a strategy that starts to use less nuclear power all the time?

**The Chair:** Mrs Johns, I know you desperately want to get in there, along with other members of the committee.

**Mrs Johns:** Why I'm asking this is because —

**The Chair:** Will you rephrase it to make sure you come back to what went wrong, please.

**Mrs Johns:** What went wrong. I'm trying to decide why they have this kind of balance of nuclear power they have and have chosen that in the past.

**The Chair:** You're moving through in expert fashion, but if you can just make sure to rephrase that, thank you.

**Mrs Johns:** Do I have to rephrase the question?

**The Chair:** No. I'd just ask him to be reasonably precise in this response, as I'm sure the committee will want to visit this with some depth in the next several weeks.

**Mr Fox:** We don't have plans to construct additional nuclear plant. The question going forward is the level of operation of the existing plant. The studies we have done suggest that if the nuclear recovery program is as effective as we hope it would be, then utilizing the existing nuclear plant to the fullest degree is the lowest-cost overall option on a going-forward basis that we have. So obviously in terms of the size of the bill Ontario pays for electricity, it would be lower with increased nuclear production from existing facilities.



**Mrs Johns:** Mr Farlinger, I have to say I have kind of a different approach to what has happened than Mr Conway. I believe that for the first time in the history of Ontario we've basically got some information out of Ontario Hydro that we should have been getting all the way along. I think you are instrumental in that happening. Maybe there's a lot of political pressure or maybe there are a lot of different reasons for that happening. From my standpoint, I see it as finally someone having had the nerve to put this out for the public to have a look at. I commend you for that.

What I'd like to ask you is, if you had control of where this all went wrong and you could start back again 10 years ago or something, who should have been regulating the system better to ensure this didn't happen, that the public's information was out there and the public wouldn't have been finding out things when there's an environmental leak and someone finds it out, or when the human resources get so bad we get minimally acceptable? Who do you think should have been telling us about this over the past 10 years?

**Mr Farlinger:** I think there has been, I don't say enough disclosure, but there has been disclosure of some problems in nuclear over the years. In the briefing book you got, which I read over the weekend too, I discovered that Ken Hare was appointed in 1989 because the government was worried about nuclear. So this isn't exactly a new issue.

Strangely enough, according to that report, he was quite prophetic. What he said was that the nuclear units are safe, but that we've got to really watch our human resources, we've got to watch our management who are looking after them, because that's where it can all go wrong. If we had paid enough attention to Ken Hare's report at that time, maybe we wouldn't be as badly off now as we are. All I'm saying is that this has been looked at before.

Where did we go wrong? How could we have improved it in the past? I don't know. We do need open accountability in a government-owned company and we haven't had completely open disclosure of everything that was going on in this company, particularly in nuclear. That's my take on it.

**The Chair:** Thank you, Mr Farlinger. I want to remind the committee that we have time for one complete round, again staying to the 10-minute cycle. We'll now begin with the opposition party.

**Mr Conway:** I want to just correct the record. Tom Adams was quite helpful in reminding me that the AECB has in fact had restrictions of six months on at least one other occasion, at Bruce in 1991. I appreciate Tom's help on that, although I have been referring all afternoon to AECB documents that were released following the announcement on August 13, 1997, where they themselves refer to the unprecedented six-month renewal for Pickering in December 1996. So it's very clear that the federal regulator viewed the situation in the fall of 1996 as a very serious matter.

Having corrected that, I want to come back, because time is obviously very limited, and I want to be very direct, Mr Farlinger. I'm having a very real problem because you're a senior executive from Bay Street and you're nonchalant in some respects to a remarkable degree. You're running a nuclear company, essentially, and there are all kinds of problems inside and outside being commented upon, and again it all culminates in August 1997 with the IIPA report, which doesn't tell us anything new but sure leads to a dramatic development. Never in the history of the utility, never in its 90 years has there been such an abject public confession of failure, maladministration, incompetence and stupidity as we saw that day in August 1997.

I ask myself the question, "What else is going on here?" Those of us who have been close to this debate for a while know that alongside this debate there has been a very vigorous debate in the community, certainly within Hydro, and as between Hydro and the government, about the future of Ontario Hydro: Should it remain a public utility, should it become a private enterprise or should it become some enterprise that brings the two together?

Now I go back to your document. You were telling us a while ago that Maurice Strong asked you in 1993-94 to join a group of people and give some advice. That you did in a variety of ways. You released, together with Mr Homer and Mr Caine, a report dated June 22, 1995, titled Ontario Hydro and the Electric Power Industry, where your well-known views about privatization were laid out, in quite a compelling way I might add. But when I think about what happened in August 1997 and reflect upon the advice you gave in June 1995, what do I have to reflect on? You observe there's big change coming in this sector, that your strongly held view and that of your colleagues is it must go private if it's going to compete in a continental market. You then go on to indicate that there has to be clear government leadership, that public enterprise is just not going to be able to function in the electricity sector in the 21st century.

1720

You indicate, very interestingly, particularly in your appendices, that where denationalization or privatization has occurred, whether it was in Konrad Adenauer's Germany or in Margaret Thatcher's Britain, one of the preconditions was to demonstrate very clearly that state-owned enterprises weren't up to the task, were miserable failures. You do so indirectly by citing the three academics in the Journal of Finance, June 1994.

Well. What we certainly got in August 1997 was the chairman of Ontario Hydro telling the people of Ontario, "This is a cult-ridden company we've got and you ought to be concerned about the fact that they're running minimally acceptable nuclear power plants." Then we also get a recovery plan that says, "We should and we will lay up the four units at Pickering A and three units at Bruce A," ostensibly for safety reasons, although I find it interesting that on September 23, 1997, the federal regulator certainly has some questions as to whether or not that action was justified. They'll talk to that when they get here, but they

certainly have indicated they thought that might have been precipitous action on your part.

Then I think, one of the things Bill Farlinger makes very clear in his paper in June 1995 is that there is this problem of stranded assets. If you're going to take companies like Ontario Hydro private, you've got to deal with the stranded assets, particularly the high-cost, low-performing nuclear assets. You've got to get them off book. Wow. One thing this recovery plan does is that. It certainly gets a good chunk of the nuclear division laid up and eligible for inclusion in what objective observers might consider stranded assets.

Being from Missouri, a person might think; "Really, since Andognini and the IIPA didn't tell us anything in August 1997 that the federal regulator hadn't been telling us for three years" — and yes, it had to be dealt with etc and the federal regulator appears to be coming along and is somewhat more comforted by some of your later actions — "could there be another agenda here in the best tradition of Adam Beck? Might we only be getting part of the story from the chairman? Is Bill Farlinger, in the best tradition of Ontario Hydro leadership, operating with not one but at least two agendas?"

Mr Farlinger, how do you deal with those people who might say: "You know, that Bill Farlinger put on quite a show that day in August 1997 when he went out of his way as often and as colourfully as he did to talk about that nuclear cult running this space-age technology next door to the biggest metropolitan community in Canada. You ought to be worried, because they're cultists, running minimally acceptable plants?"

It seems to me you did two things. You certainly reduced public confidence, not just in Ontario Hydro Nuclear, but since Ontario Hydro is largely a nuclear company, boy, did you do a number on the public's confidence about the public enterprise that is Ontario Hydro. So like Konrad Adenauer and Margaret Thatcher of your description two years ago, you certainly met one important objective of denationalization or privatization. Then, with this recovery plan, you laid up seven of 19 nuclear reactors, which just happily provides absolution to the stranded assets problem that will confront anyone who wants to privatize Ontario Hydro.

How would you respond to that Missouri analysis of what you might be up to here on a different plane?

**Mr Farlinger:** I've been trying to make notes, Mr Conway. You dealt with about 15 different items, as far as I can see.

First, I absolutely do not agree that there was nothing new in the Andognini analysis. It put a complete review of the whole nuclear situation down on paper where you could examine it, together with a plan as to how to fix it. To say there was nothing new there is absolutely wrong.

I don't know what you were getting at about stranded assets.

**Mr Conway:** I just want to be clear. I said there was nothing in my view that was qualitatively new between Andognini and the recent AECB reports.

**Mr Farlinger:** As to where you're going on the plan tying into my public views on privatization, I don't quite — I don't think you've even got the answer to that one yet, because I don't know where you're going. I didn't write this report; Andognini wrote it. At the time Andognini wrote it, I was chairman of the company. I was not the CEO. I had no control over Andognini whatsoever.

**Mr Conway:** This is the report I'm talking about, that has Bill Farlinger's name on it, June 22, 1995.

**Mr Farlinger:** No, you drew some connection between the Andognini report and the Farlinger report of 1995. It eludes me what that connection is.

**The Chair:** The third party.

**Mr Laughren:** I almost want to give Sean more time, but I know that wouldn't solve the problem.

I want to pick up on that because I think I see where Mr Conway is coming from. Using his Missouri analysis, if you wanted to undermine public confidence in Ontario Hydro, which would aid in the privatization of it in a political sense out there in the community — because people are very uneasy about the privatization of public power. If that's what you're out to do, to make privatization more acceptable, certainly one way to do it is to say: "Look, these people over there at Ontario Hydro couldn't run a peanut stand. We better turn it over to the people who know how to do that."

It seems to me that scenario — I've had it expressed to me by many people, that this is all a setup for the privatization of Hydro. You take the nuclear section and you do what you will with it, but then you say, "These people can't run this." I don't want to put words in Mr Conway's mouth on that.

**Mr Farlinger:** How do you get from Andognini, an American who came in to do a report on a nuclear plant, to the privatization of the company?

**Mr Laughren:** That's not much of a leap if you're from Missouri. Surely what Mr Andognini's report does is undermine the whole nuclear division of Ontario Hydro. I'll let Mr Conway make that argument at another time.

I want to ask about the debt retirement, because it is statutory, as we know. If the government of the day has said there will be no rate increases regardless of the problems at Hydro, then may I assume that rate, whether or not it makes sense to extend the debt repayment or — I'm not sure how you do this — write down assets in the company, you would do that rather than go against the will of the government of the day, even though you don't have to listen to the government of the day in a statutory sense?

**Ms Clitheroe:** As you know, the way the Power Corporation Act is set up with this SDR requirement, the company must plan to meet that formula in the act. The options around making that are either to have your cost pass on into rates or the board has the rate-setting or rate-ruling ability to exclude costs from rates. They can do that either by excluding them from rates and attributing them against the equity of the company, or they can exclude them by capitalizing them and then amortizing them over a period of time.



1730

**Mr Laughren:** Can you help me out on that, then? How can you exclude costs from being part of the — unless you put off into the future their payment?

**Ms Clitheroe:** The two ways the act allows for, according to counsel, is that the board can either capitalize those costs and write them off over a longer period of time —

**Mr Laughren:** Right, that I understand.

**Ms Clitheroe:** — so they get passed on into rates but simply over a longer period of time, and in that way you're meeting your SDR requirement, or you can opt not to pass those on into rates at all and exclude them from the rate base. In that event they are attributed against the equity of the company. That's in the business judgement of the board as to what is in the best interests of the company. Taking into account what is the business judgement of the board would be, what is the government policy of the day? The government of the day, of course, as you know, always has the ability to give a government directive to the company. It could do so, and the board would then take that into exercising its business judgement.

**Mr Laughren:** But the board doesn't have to follow the government directive, right?

**Ms Clitheroe:** On the government directive, yes, the company would be obliged to follow the government directive.

**Mr Laughren:** That's in the Power Corporation Act? We were told there was nothing like that in the Power Corporation Act that required the Hydro board to follow any government directive.

**Ms Clitheroe:** I believe if there is a government directive, then the board would be taking that as a given in the exercise of their business judgement, but I can check with staff who provided you with an earlier briefing to determine whether that is inconsistent with something you've been advised earlier.

**The Chair:** Ms Clitheroe, you are a member of the board?

**Ms Clitheroe:** Yes, I'm a member of the board.

**The Chair:** So that is your understanding as a member of the board?

**Ms Clitheroe:** That's right.

**Mr Laughren:** That's interesting, because I understood that the Hydro board, if they didn't like the directive of the government or felt that it was irresponsible and being done for political reasons — these are my words, not anybody else's — you could then say — not that you would use this language, Ms Clitheroe — “Go blow it out your ear. We're not going to do that. We're not going to be part of your political solution on rates, and the only responsible thing to do would be to raise rates.” That's a scenario that I think is quite possible, although I take guidance from people who know more about the Power Corporation Act than I.

**Ms Clitheroe:** I understand that in a briefing I think you received last week, having read the transcript of the briefing last week, you were advised that government policy would be considered by the Hydro board. Then

more directly, I don't know if the issue of a written government directive was considered, but certainly that would be stronger than simply expressed government policy.

**Mr Laughren:** Is our legal counsel able to help me out?

**The Chair:** I'm already inquiring in that direction, Mr Laughren.

**Mr Robert Power:** I may not have caught part of the context as we were moving around, but within the Power Corporation Act there are provisions under section 10 that the minister may issue policy directives through the Lieutenant Governor in council basis. As well, there's a memorandum-of-understanding provision under section 11. The MOU as we understand it — we're checking on this — has not been executed. That would expressly require the corporation to do certain things. Unless there's a specific policy you have in mind which the minister may have passed, we can't comment without —

**Mr Laughren:** I'm thinking of rates specifically. If the minister or the government of the day says there's going to be no increase in Hydro rates, they're going to be flat-lined, which governments have been known to do, what responsibility does Hydro have? What if the Hydro board says, “It's our considered judgement that that's an irresponsible position, given all sorts of scenarios”? Who has the final say if it comes down to a crunch? That's the question for me.

**Ms Clitheroe:** My understanding of the government directive is that a government directive cannot override specific provisions of the Power Corporation Act, but in the event that the government directive is not overriding a specific provision but simply directing the board to operate in a certain way, the board would be obliged to operate in that way.

**Mr Laughren:** I think they would be advised to; I'm not sure they would be obliged to. But that's another question, I suppose.

I don't know how much time I have.

**The Chair:** You have another minute and a half. You'll make that seem like two hours.

**Mr Laughren:** Thank you, Mr Chair. I think that's being damned by faint praise.

I wanted to ask about the whole question of, in the IIPA report they talk about the problems and the culture in the nuclear division. I wondered whether the problems in the nuclear division are unique to that division or whether they are more broadspread throughout the corporation.

**Mr Farlinger:** So is the board wondering that. We've taken on an initiative to review the other major operating divisions in a manner similar to the Andognini report, with the help of outside consultants, to determine exactly that. What is our guess? Our guess is that the rest of the units of the company are not in the same culture exactly as nuclear, because there is a nuclear culture, so we're told by nuclear experts. But could there be problems in the rest of the company of a similar nature to some degree? Yes. So we're having that review done.

**Mr John O'Toole (Durham East):** I'm from Durham region. I have two nuclear operations in my area, so I'm

quite concerned for the safety and need to be reassured that the public safety is certainly assured.

Just to start on a fundamental question — I have two or three questions, one to do with safety and a couple to do with the recovery plan. I'm just wondering, did your predecessors, Maurice Strong and others, have the degree of alarm with respect to the short-term safety concerns as you have or had?

**Mr Farlinger:** I don't know how to answer that. I don't think so.

**Mr O'Toole:** To your knowledge, is there any precedent to the fact that a safety concern not initiated by AECB has resulted in significant initiatives on your behalf and Mr Kupcis's with respect to the Andognini report, or has the safety always been initiated by the regulator?

**Mr Farlinger:** My understanding is that this sort of major change has usually been initiated by the regulator.

**Mr O'Toole:** I appreciate that.

**Mr Farlinger:** I guess we believe, as Mr Conway stated so eloquently, that we were getting a big message from the regulator —

**Mr O'Toole:** That's where I came up with that point.

**Mr Farlinger:** — with the six-month and the nine-month licences.

**Mr O'Toole:** Right, and the fact that the regulator has a responsibility in all of this as well to signal somehow to you, as the operator, or the public.

I want to focus for a moment, if I may, on the recovery plan itself. As other members have said, we were briefed basically with the financial reports etc, but with some concern I looked at 1995, showing a profit of some \$628 million, and then very quickly in 1996 you did about a \$2-billion write-off. I suspect those were, in some respects, unutilized assets of some sort. I'd be looking for some kind of explanation of the variation from profit to loss for a company that clearly on record has this huge debt of \$30 billion-plus. I understand how you must recover costs and how you show it openly on statements. There's a fair degree of variation there, though.

That doesn't give me much confidence for the hastily initiated recovery plan, which is a quick pull on \$8 billion. There are some swings there that I have some discomfort with in such a volatile environment. We're dealing with very significant assets that are being shelved; the variation to say that some time earlier on some group of managers decided that we had 19 generators or reactors here and all of a sudden we lay off some 10,000 people, pay them bonuses, and now we've got a shortage problem with personnel, an HRM planning problem. It doesn't give me much confidence.

Now that I'm saying I've paid them off, now I'm going to try to hire them back, as Ms Fisher suggests is one of the options. This kind of expertise leaves me feeling rather uncomfortable. I gather you've addressed it and put it in the opening, and I appreciate that because we need to make sure that you have qualified personnel. You can respond as you wish.

## 1740

My last point comes from Mr Fox's statement basically in the opening remarks. You said that some portion of the generating capacity was to be sold, I gather, on contract to someone, probably in the United States or someplace. That's the case that showed us kind of a revenue side somewhere in your plan. Now that's being nixed. That's being removed because obviously we want to ensure stability of supply here.

I have some problem now with the great planning wisdom that I've seen, not to be too critical here, but we're going to have to buy our way out of contracts for a utility that knew was progressively — you told me from 1980 to 1995 we've had about a 50% or a 40% reduction in capacity performance. We're doing this kind of thing on one hand and now we're going to have to pay a penalty to get out of it. I'm not really confident in that kind of environment. That kind of planning horizon just leaves me really quite uncomfortable with this instantly put forward recovery plan of some \$8 billion. I need to be reassured. In the long run, I'm sure we'll hear some comforting remarks. If you can respond those observations, I'd appreciate it.

**Mr Farlinger:** I'll let John respond to the last one first, which is his department, and then I'll try to respond to the earlier part.

**Mr Fox:** One clarification. In my comments I didn't make any reference to paying a penalty to get out of contracts. We are trying to negotiate out of those.

**Mr O'Toole:** There's no penalty to get out of your export contracts? How much were those contracts? A couple of billion?

**Mr Fox:** I'm not sure on the total dollars. There are about 600 megawatts of capacity via contract, but as I say, those negotiations are ongoing and I think it's premature to presuppose there is a penalty associated with the renegotiation.

I would also note that those contracts, the ones that we are negotiating out of, I think from memory and subject to check, were entered into in the 1994-95 time frame, when we were not aware of the magnitude of the erosion of nuclear performance. We entered into those at a time when we were reasonably certain that we would have adequate capacity to fulfil them.

**Mr O'Toole:** I would put to you then, if you put this on a graph from 1980 to 1995, it's a negative slope. I'm telling you, anybody who's been in the business would — I'm not trying to be smart, but you knew your performance was on that side, not the other side. Your demand lines have all been wrong for the last 20 years. They've actually been decreasing. But anyway —

**The Chair:** Mrs Fisher.

**Mr O'Toole:** I haven't really — if I may —

**The Chair:** Oh, I'm sorry.

**Mr O'Toole:** — Mr Farlinger was going to respond.

**Mr Farlinger:** I was going to respond to the first part, which had to do with the decision to lay up the seven units. That is indeed the critical issue in terms of the plan, and Andognini will be speaking to you about that. I can speak fairly quickly to part of it though. We're talking



about three units at Bruce and four units at Pickering. At the moment, we have no units operating at Bruce, so there are some problems at Bruce. Whether we want to keep those Bruce units going — which we do in our plan — to March 31 or not, at the moment they're all down. This isn't a little myth that there's an issue or a problem here. Can we get them back up? We're trying to and we're hopeful that we'll get them back up to run for a while this winter, but right now they're not running.

The units at Pickering, there's a long-standing arrangement with the regulator to make some adjustments in those A units and the date for that one is December 31. Now, either one or two units are not affected by that deal, but two of them are on a deal. Could we get the regulator to back off that? Maybe, but it's a long-standing deal that they would go down anyway. That's sort of why — the decisions weren't just, "Let's close up seven." When you do close up seven, it does give you the resources to fix 12, but you'll hear a lot more of that because that is indeed the critical decision that's being made that drives all the cost in this whole program.

**Mr O'Toole:** Oh, yes.

**Mrs Fisher:** I just want to revisit the issue that has sort of been spotted a couple of times this afternoon. If in the end of all of this hearing process we find that there are other options for consideration, I just want to make sure one more time that in fact the door is open to that type of discussion and the door is open to that type of consideration.

**Mr Farlinger:** Any plan that will provide us with equal or better safety and will help us with our supply problem in the province and, within limits, wouldn't cost any more is on the table, if it can meet those criteria.

**Mrs Fisher:** I just want to come back to one other very short question. I alluded to it earlier and I didn't wait for the response, or maybe it got lost in a few other questions. Again I come to the question of timing here and decision-making and approval by boards. We're on the cause and effect, if you will, today, a what-happened-and-why scenario. I guess that's up to the decisions made prior to today.

I just want to ask this question: How long did the board members have the report before it was voted on to be adopted and implemented as it is? How far in advance of that board meeting?

**Mr Farlinger:** The board had the report itself for a week. The board of course had heard reports every month since Andognini came along about where it was going, but on the recovery plan itself, that was a surprise.

**Mrs Fisher:** Yes.

**Mr Farlinger:** The board wasn't happy with the economic results of that, and extensive due diligence was done at the time of the next board meeting to review, and the auditors, as I've said, were hired to assist in the review. So a very extensive review was done of the plan and more members of the board became true believers. I promise you, you people will have to spend quite a little bit of time understanding the issues before you will become true believers, if you do.

**The Chair:** On the issue of true believers, maybe I can step in at that point and bring us to a smooth conclusion, Mr Farlinger. The committee has perhaps indulged me from time to time with asking a question. Maybe I could just ask one simple one in conclusion for today.

We are looking at what went wrong and why. When I sailed into this process not long ago, I had brown hair and it was in abundance. I can perceive you've been through the waters longer than I. Let me ask you to respond to this. One of the areas that I've looked at has been the issue of the human resources. Obviously it's been alluded to by all the members of the committee. In your experience and in the discussions of the board, were there any reports that have preceded the reports we see before us today over the past five, 10 years that have given any indication to a collapsing corporate culture, have given any indication to severe difficulties in what we might call human management?

**Mr Farlinger:** I'll try to think of as many as I can. I alluded to the 1989 report that talked about keeping an eye on the human resources. So that was raised with the board at that time. That gave rise to a group called TAPNS, a technical advisory panel which reported to the company and the board every year. Their direction was more technical than people-resourced, but I guess they must have made some comments on people resources.

**The Chair:** Is it reasonable to assume that at least from 1989, if not before that, there is the twisting of the alarm bell that there are some problems occurring and it's being identified for different levels of management, up to and including the board?

**Mr Farlinger:** Yes.

**The Chair:** The kinds of issues identified in the IIPA did not just occur; there is a whole range of precursors.

**Mr Farlinger:** Many years, for sure.

**The Chair:** Thank you. I appreciate very much your attendance at the committee today, Mr Farlinger. Obviously the time is completed and we have to go up to the House to vote. I want to thank all witnesses for being present today on behalf of the committee. I know they have appreciated it and I would just hope you would be held available for another return visit to the committee as we go through the next round as well. I appreciate your forthrightness and your presentation today to the committee, Mr Farlinger.

**Mr Farlinger:** Thank you.

**The Chair:** May I remind the committee members that we meet tomorrow at 3:30 pm, and that is here in this room, to deal with the Atomic Energy Control Board. We have Dr Agnes Bishop who will be here and Jim Harvie, the director general, reactor regulation. I remind you also that at 7 pm the committee will resume again. Dr Allan Kupcis will be with us. I know a number of questions arise out of today's questioning and hopefully we'll have the detail together.

**Mr Conway:** Just a quick information request, and I make it while Mr Farlinger is here. My knowledge is that the Hydro corporation is seeking a new president. I've been requesting for some time a copy of the job descrip-

tion that Hydro has prepared as it seeks a candidate through the good offices of your good friend and mine, Tom Long, to find a new person to take over as the new president, so what I would like for the committee is a copy of the job description that is being circulated —

**Mr O'Toole:** You already have a job.

**Mr Conway:** I'm quite serious. I'd just ask Mr Farlinger if he would make that available to the clerk of the committee.

**The Chair:** That's a reasonable request.

**Mr Farlinger:** Of course.

**The Chair:** With the exception of the aside, that slipped by just as well as mine do, that would be a reasonable request and let's ask for that, if we wouldn't mind.

Then with that, the committee will stand adjourned until — oh, sorry. Hold it.

**Mrs Fisher:** Before we adjourn, so we can come prepared on a daily basis, I just want to be clear I understand who's coming tomorrow. Are we pursuing the same train of thought, past and why, or where are we now?

**The Chair:** You are still in the what-went-wrong-and-why phase because you're dealing with the atomic energy board and that's a regulatory body. There may be a little bit of movement on the envelope on that one tomorrow, but we start from what went wrong and why and what was the role of the AECB in all of that.

**Mrs Fisher:** Thank you very much.

**The Chair:** Then we will stand adjourned until 15:30 tomorrow.

*The committee adjourned at 1752.*





## CONTENTS

Monday 6 October 1997

<b>Ontario Hydro</b> .....	<b>H-43</b>
Mr William Farlinger	
Mr John Fox	
Ms Eleanor Clitheroe	

### SELECT COMMITTEE ON ONTARIO HYDRO NUCLEAR AFFAIRS

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H-5

H-5

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**Official Report  
of Debates  
(Hansard)**

**Tuesday 7 October 1997**

**Journal  
des débats  
(Hansard)**

**Mardi 7 octobre 1997**

**Select committee on  
Ontario Hydro nuclear affairs**

**Comité spécial des affaires  
nucléaires d'Ontario Hydro**



Chair: Derwyn Shea  
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## LEGISLATIVE ASSEMBLY OF ONTARIO

SELECT COMMITTEE ON  
ONTARIO HYDRO NUCLEAR AFFAIRS

Tuesday 7 October 1997

## ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

COMITÉ SPÉCIAL DES AFFAIRES  
NUCLÉAIRES D'ONTARIO HYDRO

Mardi 7 octobre 1997

*The committee met at 1532 in committee room 151.*

**The Chair (Mr Derwyn Shea):** The committee will be in order. I'll get the gavel later and try to bang the table a little lighter than that.

We have a number of items before us. To remind you, a lot of documentation has been forwarded to the committee by the AECB. It has not all arrived, or at least is not all in the hands of members. It will be distributed as soon as we can make it available. That is not all, I understand, of the AECB's making. We understand that; sometimes a delay will happen. But it will be in the hands of members, and if there are questions arising from documentation that has been handed out, we will be able to ask witnesses back to respond to information that flows from that.

You also have documentation before you today that is presented by Mr Power, our legal counsel. It responds to a number of issues raised in yesterday's hearings.

To remind us, today there are two portions of the agenda from now until 6 o'clock, when we will rise for votes in the House: We have Dr Agnes Bishop, president of the Atomic Energy Control Board, and we have Jim Harvie and Audrey Nowak; this evening at 7 pm we have Dr Allan Kupcis. That is the agenda for today.

**Mr Doug Galt (Northumberland):** I have a question. It relates to some confusion I was left with from the testimony being given yesterday by Ms Clitheroe and the response by Mr Power. We had some training, Electricity 101, so to speak, at the beginning. My understanding was that the Ontario government is very much at arm's length in the operation of Ontario Hydro. I'd really like further clarification from our legal counsel. Ms Clitheroe led us to believe that on a day-to-day basis almost, through directives, the Ontario government had a lot of control over Ontario Hydro. Those two opinions are diametrically opposed. I'd like some clarification from a neutral body.

**The Chair:** I think that's a reasonable request, and that did come out in the testimony that was presented to committee. Mr Power, would you respond to Mr Galt's questions.

**Mr Robert Power:** Actually, I'd like to defer that to my learned friend Mr Campbell, who had been prepared to speak to that.

**Mr Galt:** I'm not really looking for it right now, Mr Chair. I'm looking for it down the road or in writing, or however it can be put into the record. I just need clarification.

**The Chair:** Let me ask if he is able to give that information now.

**Mr Richard Campbell:** Yes.

**The Chair:** Let's do it now so we're all very clear about what the legislative responsibilities are.

**Mr Galt:** If that in fact is fair to Mr Campbell.

**Mr Campbell:** Richard Campbell, consultant to the committee. The testimony last week from the Ministry of Environment and Energy indicated, when the question was put to them, "Is Ontario Hydro regulated in the sense that the Ontario Energy Board regulates the gas industry, for instance?" the answer there was no. The answer provided, however, did indicate that there are a number of statutory responsibilities under the act; that Ontario Hydro needs to go before order in council for approval on a number of different things which are listed in the materials and which we can highlight to you again.

The specific question with respect to the rate freeze that was left on the record yesterday afternoon was, "Was the rate freeze a subject of a directive power under the act?" The Power Corporation Act, in section 10, provides that the government can make directions to the utility under certain conditions. That is not the case with respect to the rate freeze. The rate freeze is a statement of government policy which Ontario Hydro would normally take account of. In addition, in this case, Ontario Hydro has embraced that same policy as a corporate objective, to keep rates frozen until the end of the decade. It has not been the subject of a specific directive power under section 10.

**Mr Galt:** And you will provide us with some other examples of where they do and do not have direct control over Ontario Hydro?

**Mr Campbell:** Yes, we will.

**Mr Floyd Laughren (Nickel Belt):** I want to be perfectly clear, because I was the one who was asking those questions yesterday of the people from Ontario Hydro. Forgive me; I'm a country boy from the north who has a linear mind, and I really need this clarified. Are you saying — I'll use an example which you can say is hypothetical, but on the other hand it's not fanciful either. If Hydro felt, as they viewed their responsible role, that they needed a rate increase for whatever reason, for safety reasons, economic reasons, environmental reasons, whatever, and if the Ontario government, regardless of who was in office, declared that they wish to have a rate freeze by Ontario Hydro, who at the end of the day says yes or no to that? Can Hydro say, "We cannot, in all good



conscience, go along with that directive or request by the provincial government"? Does Hydro have the statutory right to do that?

**Mr Campbell:** Again, the question of a rate freeze has not been the subject of a direction under the act. If it were, then it's my understanding that the board of directors has the authority to make a rate decision. In the specific instance of a direction under section 10, if the board of directors feels it's in the best interests of the corporation, they have the authority to make that decision.

**Mr Laughren:** Okay. That clarifies it. In order words, there is indeed that arm's length. This is one way of putting it.

**Mr Campbell:** With counsel, we will put all this in writing to members of the committee.

**Mr Laughren:** It does indicate that there is an arm's-length relationship there. That's one way of spinning it. The other way of spinning it is that Hydro is, as many of us have been saying for a long time, basically a government unto itself and can decide what they think is best. At the end of the day, if they decide for one, would assume, responsible reasons that they don't want to follow that directive from the government, then so be it, that's their right. I don't want to put words in anybody's mouth, but that is, as a layperson, how I would view that.

**Mr Sean G. Conway (Renfrew North):** On that point, if I could, Mr Chairman, I think I've raised this point in the steering committee. It's a very good issue. That was one of the reasons some days ago I recommended to the steering committee that it might be a very useful thing to summon to this committee one of the ablest people I've know in my years here, W. Darcy McKeough, who served as both energy minister and finance minister, who is quoted in the academic literature in recent times as speaking directly to this very basic issue. I don't know whether Mr McKeough would come, but I would certainly be interested to have him here to, among other things, speak to that relationship. Certainly some of the recent literature that has been published by academic presses in this province has some very interesting testimony from Mr McKeough on that subject, about his very central experience in that triangular relationship.

1540

**The Chair:** Thank you. I appreciate the interventions made by all three caucuses. Mr Galt, the written documentation will be provided for all members.

**Mr Galt:** Obviously, there are a lot of people still confused on this particular topic, and anything we can do during testimony to clarify this for this committee, as well as the people of Ontario, would be very important.

On clarification, there is a tremendous amount of information we have for the meeting today. I know this is kind of short notice, but in the future, if we can get this even 24 hours ahead, it would be helpful.

**The Chair:** I've spoken with the clerk. Every effort is being made to ensure that we get documentation to members as quickly as we can in advance of events. I share that interest. She assures me that every effort will be made to accommodate the wishes of the committee.

The authority issue is one I'll take under advisement. Let me give some thought to how I might best facilitate the concerns of the committee. We may try to find appropriate time for a further discussion on this matter, sooner rather than later, because clearly it is very central to the matter before us right now.

## ATOMIC ENERGY CONTROL BOARD

**The Chair:** Thank you very much to the witnesses. I appreciate your indulgence as we go through some previous business. Now let's turn our attention to — first of all, would each witness please, as they present, identify themselves for the purpose of Hansard? Let me begin by welcoming the president of the AECB, Dr Agnes Bishop.

**Dr Agnes Bishop:** Thank you, Mr Chairman, ladies and gentleman. I would like to briefly introduce my colleagues to you. Mrs Kate Maloney is the director of the waste and impact division; Mr Jim Harvie is the director-general of reactor regulation; and Mrs Nowak is the head of our legal services unit of AECB. All are here to help answer any of the questions which you may have and are acting simply as resources for me.

In these opening remarks, I would like to address five areas: the mandate and responsibilities of the AECB; general issues relating to safety margins and licensing; overall performance of Ontario Hydro Nuclear; AECB's review of the IIPA and the safety system functional inspection findings; and the Atomic Energy Control Board's review of Ontario Hydro's recovery plan. All will be done very, very generally.

First, I would like to describe the Atomic Energy Control Board's mandate. The AECB is the federal agency established as Canada's nuclear regulator in 1946 by Parliament. It is composed of five Governor in Council appointees and has a staff of about 400. Approximately one-half of the staff work in areas related to power reactors. Under the Atomic Energy Control Act, the AECB has the authority to make and enforce regulations governing nuclear power production and use in Canada. The regulations establish the licensing regime, and I will describe that shortly. AECB's purpose is to regulate in such a way as to have no undue risk to health, safety, security for both people and the environment. The AECB is not responsible for energy policy, for licensees' cost structures or other business-related areas.

I'll turn now to the AECB's licensing process. The process is briefly outlined in chapter 1 of the briefing book, and I will not repeat those contents here. However, there are certain issues which I believe need to be highlighted.

The AECB fulfils its responsibilities in the regulation of nuclear power plants by setting the standards of safety, by monitoring compliance through regular inspections, evaluations and audits and by taking appropriate enforcement action so that any non-compliance is corrected.

The AECB, in issuing a licence, is stating that based on its evaluation of relevant information, the facility can be, and AECB expects it to be, operated safely under the

conditions of the licence and for the term the licence is issued. It is not within the mandate of the AECB to either manage or to tell the licensee how to manage the facility. It does, however, have the responsibility to point out to the licensee any management practice which is contributing to a decrease in operational standards and which has the potential to eventually affect safety. The final responsibility for safe operation of the reactors must and does lie with the licensee.

Conditions of licence and the term of a licence may be changed at any time. If necessary, the AECB can order the shutdown of a reactor. The regulator distinguishes between issues which are of immediate concern to safety and longer-term issues which have no immediate implication for safe operation but have the potential to eventually affect safety if not corrected. Each is handled differently.

The safety standards set by the AECB are very high and require very conservative safety margins. A plant which satisfies these standards would receive an operating licence even if parts of its operations are being performed at a minimally acceptable level as defined in the IIPA report, as long as the safety margin is still acceptably conservative.

I will now summarize for you some of AECB's regulatory activities over the last decade in relation to Ontario Hydro. The first significant criticism Atomic Energy Control Board made of the quality of operations and maintenance of an Ontario Hydro nuclear plant occurred in 1986, and that was Bruce A.

By 1989, the results of the AECB inspections, audits and evaluations of Ontario Hydro nuclear facilities had convinced the board that the operating and maintenance standards at Ontario Hydro had declined to the point where corrective action was required. While the AECB concluded the reactors were being operated safely and therefore could continue to be licensed, significant improvements were needed to maintain adequate standards of safety in the longer term. The AECB informed the president of Ontario Hydro of this conclusion.

Ontario Hydro acknowledged the deficiencies and took several initiatives in an effort to correct them. They also recognized the depth of the deficiencies, as evidenced by their estimate that it would be 1995 before good or excellent performance by industry standards could be achieved.

As outlined in chapter 2 of the briefing book, over the years, in spite of new recovery initiatives, such as the business improvement plan of 1993 and others, changes in management personnel and organizational changes, Ontario Hydro continued to fail to improve their overall standards of operation. There were improvements in some areas, but many other targets were not being met. The plants were, however, continuing to meet the safety margins for licensing.

It should also be noted that over the years the AECB informed Ontario Hydro, at the most senior levels, of its dissatisfaction. We have documented the concerns in publicly available reports and discussed the issues at public meetings of the board. On August 11, 1995, the Pickering station manager was advised that if rapid improvement

was not demonstrated, the AECB staff would recommend to its board members that the licences for the stations should be revised to restrict operation.

Ontario Hydro senior management recognized the letter from the AECB, giving notice that Pickering was on the threshold of being shut down as a "wake-up call." Ontario Hydro responded with a new quality-of-work initiative to address the underlying issues. AECB staff and board followed the operations at Pickering very closely.

In July 1996, I met with Mr Farlinger, chairman of Ontario Hydro's board, and Dr Kupcis, president of Ontario Hydro, to discuss AECB's continuing dissatisfaction with their overall nuclear performance and the necessity for Ontario Hydro to produce sustained results and to do so soon. In the opinion of AECB, unless Ontario Hydro was successful at improving its performance, it would only be a matter of time before other stations reached the operating level of Pickering; that is, in danger of regulatory shutdown.

#### 1550

I also emphasized that the Ontario Hydro board had the final responsibility for the safe operation of the stations. In AECB's opinion, they had not taken that responsibility seriously enough. Both Mr Farlinger and Dr Kupcis acknowledged their own internal audits had shown consistently that Ontario Hydro Nuclear's standards of operations and maintenance were only just acceptable. Both indicated a strong commitment to ensure improvements in the future.

This commitment and acknowledgement of poor performance by Ontario Hydro was stated by Dr Kupcis in a presentation to the AECB public meeting of September 12, 1996. In December 1996, Pickering received only a six-month licence. Some improvements in operation occurred and the licence was renewed in June 1997 for nine months. AECB continues to keep a very close watch on that plant. The other stations are also meeting the minimal safety margins, but all have areas requiring improvement both in the short term and long term.

In summary for this section of my report, Ontario Hydro has never been short on developing acceptable plans or initiatives to improve performance. They have consistently acknowledged their poor performance to the AECB. However, they have as yet been unable to transform those initiatives and plans into overall improved performance.

On August 13, 1997, Ontario Hydro announced the findings of the IIPA. This announcement and the IIPA report itself confirmed two general aspects of Ontario Hydro Nuclear's operations of its nuclear facilities, and I use the word "confirmed" since this was recognized by AECB and thereafter acknowledged by Ontario Hydro since 1989:

- (1) That the performance of Ontario Hydro Nuclear was well below the level of performance achieved by the world's best nuclear utilities;

- (2) That all of the Ontario Hydro nuclear plants were being operated in a manner that meets the regulations and



accepted standards related to nuclear safety. This confirmed AECB's position that in spite of deficiencies in performance, all of Ontario Hydro nuclear plants were operating within an acceptable margin of safety and therefore licensable for operation.

Ontario Hydro further announced that it had directed management to begin a major overhaul of their nuclear facilities and that part of the nuclear recovery plan would involve layup of four units at Pickering A and the three operating units at Bruce A. They clearly stated that they were not closing these units for safety reasons but that they needed first to concentrate the resources on the other 12 units.

The team of nuclear experts who performed these reviews applied performance objectives and criteria, which include essential nuclear safety and environmental aspects of operation, and their results were judged against industry standards. The AECB uses similar criteria in its reviews with the exception that in the IIPA review the Ontario Hydro team applied criteria related to cost-competitiveness in defining industry standards in addition to the safety and environmental aspects. AECB's regulatory mandate does not include a licensee's cost-competitiveness.

Since the middle of August, AECB staff has been reviewing both assessment reports. They have extracted just over 400 safety-related findings from the reports which they are reviewing in depth. The preliminary report of these findings is to be found in board member document 97-167, which has been provided to you and which will be placed before the AECB public meeting this Thursday, October 9. The final AECB report will be before the Atomic Energy Control Board meeting on November 13 this year.

The findings are being reviewed by AECB staff. Conclusions to date are:

- (1) No issues require immediate regulatory action.
- (2) Previous AECB staff inspections, audits, appraisals and reports have identified the same issues and reached similar conclusions.
- (3) While the utility's defence in depth at nuclear power stations has been reduced, it has not been reduced to the point that safety limits are compromised. Based on safety considerations, continued operation of the reactors is acceptable in the short term. Significant improvement is necessary in Ontario Hydro Nuclear's operation to improve safety margins and prevent further deterioration in performance.

Ontario Hydro has submitted a plan to the AECB with schedules whose implementation is intended to achieve the needed improvements to Ontario Hydro's nuclear operations. They have also submitted a proposed set of performance indicators which can be measured to determine whether adequate performance is being achieved. These documents are now under review. The intention is to develop a document with specified schedules, milestones and performance criteria in a form that could be referenced as a condition of all Ontario Hydro operating licences. Ontario Hydro must also receive approval from

AECB for its layup plans for the Pickering and Bruce units and for restart of those units.

In 1993, when Ontario Hydro was introducing their business improvement process, they stated it was intended to assist it to face the "formidable challenge of improving unsatisfactory performance of our nuclear generating stations and supporting divisions." Those same, if not greater, challenges are facing Ontario Hydro in 1997. The AECB continues to hold the board of Ontario Hydro responsible for the quality of operation at its stations. The AECB expects results and expects results soon.

If Ontario Hydro cannot achieve improvements in its performance in safety issues, it will only be a matter of time before safety margins will be compromised and forced closures will occur.

**The Chair:** Are there any other members of the team from AECB who are making other comments or are they here to answer questions?

**Dr Bishop:** They are here to help answer your questions.

**The Chair:** We'll begin the questioning in rotation by caucus. I'll begin today with the third party.

**Mr Laughren:** Thank you, Mr Chair. I'm glad you're there.

**The Chair:** I always look after your interests as best I can.

**Mr Laughren:** I appreciated very much your comments and the directness with which you presented them without any inflammatory rhetoric surrounding them. Nevertheless they were pretty direct and very blunt.

One of the most chilling comments you made, I thought, was when you indicated that Hydro had always been able to put forward plans for if not recovery, improvement, but had trouble translating that into performance. I'm wondering, since they've already told you what they intend to do with the seven reactors that are being laid up — which I find a strange term, but maybe that's the industry's term — are you comfortable that now they will be able to translate plan into performance?

**Dr Bishop:** Our position is that time will tell. We are in the middle of reviewing that total recovery plan. It has not yet been completely reviewed. I believe Jim only received it a couple of weeks ago. First of all, we will look and see whether it looks feasible to us, but we can only wait and see whether they are going to, this time, be able to translate it through. I would not make any predictions on what will or will not be occurring.

1600

**Mr Laughren:** The work that's required, I assume you approve of the laying up of the seven reactors. I'm assuming that, and if I'm wrong I'm sure you'll correct me. I'm wondering, is there an easy way of describing the problems there, to what extent they're physical and equipment-related versus management- and employee-related, if that's the right term?

**Dr Bishop:** At the two stations they are laying up?

**Mr Laughren:** The seven reactors, yes.

**Dr Bishop:** For Pickering and Bruce?

**Mr Laughren:** Correct.



**Dr Bishop:** Okay. I think one could say that (1) management problems are present at both stations, and (2) that there are indeed equipment problems at those stations and that there is a fair amount of improvement that has to occur in both those areas.

But I would like to re-emphasize that Ontario Hydro is not laying up those two plants because of safety or because of any particular problems there as much as they are saying to us, at least, that they do not have the resources to keep all units going and still be able to put into effect the processes of improvement they feel are required. It is not the board's responsibility to say, "Yes, you may lay up this station," or "No, you may not." What is our responsibility is to see that their plans for layup are appropriate and will be safe. But the decision to lay up a plant is strictly that of a licensee. The safety of how they do it is the board's responsibility.

**Mr Laughren:** I appreciate that. I know you have to be careful in how much information you've already got and how far down the road you are to examining their proposals — I'm cognisant of that — but do you have any preliminary thoughts about Hydro's ability to fix up those seven reactors, if that's the right language, in terms of management and equipment, and at the same time, with all the resources that's going to take, continue to run the other remaining 12 reactors? Do you have any initial concerns?

**Dr Bishop:** The only comment I would make is that it would be highly unlikely that Ontario Hydro could do the improvements it needs at all of its stations without significant increase in resources, but I would not go further than that because it's not within our mandate.

**Mr Laughren:** By "resources" you mean people?

**Dr Bishop:** Resources are certainly people, but there are also other forms of resources.

**Mr Laughren:** I see. Could I ask you very specifically about this year: When IIPA did their interim report, did that report go to the AECB?

**Dr Bishop:** The interim report?

**Mr Laughren:** Yes. The date that I recall seeing is April 17.

**Dr Bishop:** I think we have the actual timing that we received the report. I would say to you that we were informed of the overall possibility of what it was going to be in the month of April. Jim, you might have some specific dates.

**Mr Jim Harvie:** We did not formally receive the interim report. We met with Ontario Hydro on April 4 at Pickering. I attended that meeting and we were informed of the findings to that date and we received the minutes of that meeting on April 15. So although we did not receive the interim report, we were informed of its contents at that time.

**Mr Laughren:** Okay. Can I ask you then — it's my next question — when the final report, known affectionately as the Andognini report, came down in August and was made public, were you surprised at the change in performance ratings of the nuclear division? If you recall, it went to minimally acceptable.

**Dr Bishop:** Right. I would say at this point in time that there were no changes in performance rating over the discussions that were held with us in April. Are you now talking about the end of April?

**Mr Laughren:** I'm talking about that interim —

**Dr Bishop:** Oh, in August.

**Mr Laughren:** Yes, in August, the change in performance rating.

**Dr Bishop:** I think we were not surprised at the overall tone of the report for two reasons: One, we already knew there were difficulties in the operations of Ontario Hydro. We would have been very surprised if they had come back with things being rosy. Two, they had been doing discussions with us, as Jim indicated, in April about the overall tone that we expected to come forward. Is that fair, Jim, on that?

**Mr Harvie:** Yes. I think the information we received in April was not inconsistent with the information that we released in August. We were aware of that kind of problem.

**Mr Laughren:** Yes. The ratings were worse in August. Could I ask you — let's see how direct you're willing to be here.

**Dr Bishop:** I know you're willing to be very direct.

**Mr Laughren:** When Mr Andognini made a presentation to the AECB in the form of a letter which indicated that he was applying for a five-year licence and hinted that in other jurisdictions they have 10-year licence approvals, and then after that announced that there was — I don't think I'm using exaggerated language — a crisis in the nuclear division, were you taken by surprise by that strange turn of events?

**Dr Bishop:** No, from the point of view that we knew there were difficulties in the operation of Ontario Hydro. When you are looking at licence requests, any licensee has the right to ask whatever they may wish. It doesn't mean they shall receive, but they have the ability to ask.

**Mr Laughren:** But to be fair, you said several times in your presentations that the responsibility for safety is in the hands of the licensee —

**Dr Bishop:** Yes.

**Mr Laughren:** — in this case Ontario Hydro, and the responsibility at that point should have been Mr Andognini's, it seems to me, not throwing the entire responsibility to you. If you had gone ahead and approved a five-year licence, which theoretically you could have done, then it would seem to me that Mr Andognini would have been, and I use the word thoughtfully, irresponsible to have asked for a five-year licence, knowing full well that the nuclear division was not in a position and should not have been asking for a five-year licence.

**Dr Bishop:** Why he specifically asked for a five-year licence, I'm assuming that should be addressed to Mr Andognini.

**Mr Laughren:** It may occur to us to ask him that.

**Dr Bishop:** We were not surprised that he would look at a five-year licence, coming from the US, where the licensing stage is longer.

**Mr Laughren:** Missouri, specifically.

**Dr Bishop:** Missouri? No comment.

**The Chair:** Thank you, Mr Laughren. We're going to go over now to the government caucus.

**Mrs Barbara Fisher (Bruce):** Good afternoon. I received this just now, so I've done a quick review of the preliminary findings of the recommendations of the IIPA by the AECB staffing. Before I get on to that, I'd like to ask just a few questions that are pretty direct.

One, it is my understanding that the licensing requirements are such that if AECB have some concern with regard to the number of trained, qualified staff as far as detail within the different trades, if those are at risk because not enough numbers are there, or if there is not sufficient staffing, that could put a licence at risk.

**Dr Bishop:** We have areas where we look at the numbers of staffing and the qualification of staffing, yes.

**Mrs Fisher:** Okay. My concern —

**Dr Bishop:** In certain areas.

**Mrs Fisher:** Right. My first question is, at what time or at what stage in the game or how long back historically did the AECB start raising a flag that the number of qualified staff requirements weren't going to be met if something wasn't improved?

**Dr Bishop:** There are two issues here. One is qualified staff who run a station, and two, the number of staff who are going to be required to make the improvements. Those are two different questions, I think. For instance, when we look at the recovery plan, we will be looking at the numbers of staff these are going to be requiring.

1610

**Mrs Fisher:** I recall being present at an AECB licensing hearing on a Bruce project, and I'm sure it's happened at others as well, where there was some ringing of a bell, if you will, that indicated that if they weren't more serious about looking at qualified staffing numbers, not the second part of what you just explained but numbers, qualified staffing numbers, serious consideration would have to be given to the license. Am I right?

**Dr Bishop:** That's absolutely correct.

**Mrs Fisher:** Could you tell me when that first happened?

**Dr Bishop:** I believe, and I can check the dates in this book, that was in 1993, Jim, and you can look it up in here, that we were concerned when the downsizing was occurring in Ontario Hydro that commitments to the increase of personnel they had made to us were not going to be fulfilled. So at least since 1993, and I can look and see whether it went before there. I'll just add one other thing. We have required Ontario Hydro now for several years, whatever that date was, whether it was 1992 or 1993, to report to us every six months on the numbers of staff they have at their stations.

**Mrs Fisher:** In reviewing that on those reports, did you continue to find that in fact the situation was worsening, not getting better, given your guidance that they ought to be paying attention to this?

**Mrs Bishop:** There were problems. It varied from station to station. There were difficulties in some of the training programs, as an example, when you're looking at

qualified people. They were not present in other stations. Our concerns about training were relayed to them. Any time we were concerned about certain areas of numbers of staffing we would also let them know about the specific areas that might be a problem to us. Jim may have more detailed answers, and I can look up when that first was.

**Mr Harvie:** We have a training program evaluation section which evaluates the training programs of Ontario Hydro staff, and as you know, we set examinations for the operators and shift supervisors in the control room. As Dr Bishop said, Ontario Hydro has been required to report to the board itself every six months for the last several years on its staffing levels.

**Mrs Fisher:** I can remember and I think you verified that there were some flags going up starting in 1992 forward saying, "You're going to be in trouble here with regard to qualified staffing if you don't do something about them." Am I right?

**Dr Bishop:** Yes, you're right.

**Mrs Fisher:** Did Hydro react in its management decision-making capacity to change that by increasing and by training up to the levels of qualified nuclear trained workers upon your recommendations?

**Dr Bishop:** There was an increased number of staff, and we can doublecheck those dates, of 1,100 since 1989, I believe, up to that time of 1992-93.

**Mrs Fisher:** And then it went backwards?

**Dr Bishop:** It did not go backwards because the AECB would not allow it to go backwards, and in fact we put in a condition that they could not decrease staff without the AECB approval.

**Mrs Fisher:** If that's the case and they were meeting the requirements at that time, why then does this IIPA proposal suggest that the reason the nuclear systems that are being talked about right now must be laid up or shut down — take your pick; right now I don't know the real definition or difference there. But they're saying, I'm reading from it, that staffing and human resource issues are the biggest problem. Do you agree with this?

**Dr Bishop:** I think that if they are to put in programs that are going to bring about recovery within a reasonable period of time, and we know it will take some years, there is little doubt that they are probably going to have to require increased resources. I'm not prepared to say how many or how much.

**Mrs Fisher:** That's fair. On that note, I have a question with regard to where those resources might come from. There are comments flying around with regard to where these workers come from. My first question would be, is a nuclear worker in an American or a British or a French non-Candu system transferable with the skills required to work in a Candu system?

**Dr Bishop:** A worker?

**Mrs Fisher:** Yes.

**Dr Bishop:** With appropriate training, yes.

**Mrs Fisher:** Do you have any idea how much training, in time, that would —

**Dr Bishop:** You'd have to ask the question a little more specifically because there are operating room



personnel, maintenance personnel, many different types of expertise.

**Mrs Fisher:** You are saying, however, that there are some transferable skills there that might benefit Ontario Hydro to have as, opposed to starting somebody brand-new?

**Dr Bishop:** Yes, absolutely.

**Mrs Fisher:** How long should the plants be expected to operate?

**Dr Bishop:** The plants were of course built to last approximately 35 or 40 years, and how long a plant will last will frequently depend on well it's been maintained. How much longer these plants will last will depend on two things: how well they are maintained and operated, and preventive maintenance occurring, and that against their original lifetime.

**Mrs Fisher:** There's significant discussion about the differences between, number one, laying up Pickering A or Bruce A and which one comes up first or last. Specifically to your considerations with Bruce A, if it's put into a dry layup as opposed to a wet layup, could you give us some idea of what that would do in terms of the potential for its restart?

**Dr Bishop:** By the board's definition, and we believe it's the same definition Ontario Hydro is using, a layup of a plant is anything where it does not prevent the plant from restarting. Whether you take the fuel out or leave the fuel in, it can be restarted again. The important difference is the degree of monitoring that has to occur. Much more monitoring has to occur in the plants that have the fuel left in than if the plant is defueled. That's the major difference, but they can both be restarted.

**Mrs Fisher:** Then there's no further deterioration because it's put in a dry layup state. Really what you're doing is freeing up human resources.

**Dr Bishop:** You have to make sure it is laid up in such a way that there is no further deterioration as well, or when you're restarting, that the plant is in a condition where it is safe to restart it. When I say we have to approve the layup plans, we will be looking at those details depending upon whether fuel is in or fuel is out within their plans.

**Mr Monte Kwinter (Wilson Heights):** Dr Bishop, thank you very much for your very frank presentation. To me it was incredible listening to the history of the regulatory sort of difficulties you've had with Ontario Hydro Nuclear over the years. Just to put things in context, can you tell me, what is the longest licence you grant?

**Dr Bishop:** Two years.

**Mr Kwinter:** And what is the shortest?

**Dr Bishop:** The shortest we have ever given is six months.

**Mr Kwinter:** So we have a situation where Ontario Hydro, certainly at Pickering, has been at the very bottom level before it gets shut down. Would that be a fair analysis?

**Dr Bishop:** Yes, and Bruce A was also given a six-month licence, I believe in 1992.

**Mr Kwinter:** The concern I have, and it was sort of evident from your presentation — Mr Andognini's report in the executive summary in the very first paragraph says, "The sense of urgency to move quickly towards substantial and sustained improvement and performance is not evident throughout the organization."

I was stunned to hear a commitment by Ontario Hydro Nuclear that by 1995 they would be in the good to excellent category. We now have a situation where not only are they not in the good or excellent category, they are verging on being shut down. Yesterday when the chairman, Mr Farlinger, was here, he had the same laissez-faire attitude. We talked to him about the interim report of April 17, and he said: "You know, I don't know what the big deal is about this report. We get these reports all the time, we look at these all the time and they say we're doing a terrible job, but you know, so what's new?" kind of thing.

1620

**Mrs Helen Johns (Huron):** I don't think he said that.

**Mr Kwinter:** That's exactly what he said. He sat here and he said, "I don't know why you're making such a big deal about this interim report."

**The Chair:** We can pass by the crossfire here.

**Mr Kwinter:** He said, "We get these reports all the time, and there's nothing unusual about that." Everybody knows the problem. We know the problem. But what we have is nobody doing anything about it, and in fact what is happening is that the situation is deteriorating.

My concern is that you, as the regulator — and I appreciate that your responsibilities are for safety and environmental concerns, and that you can identify the problem but it's up to the licensee to correct the problem. I have some very serious concerns about — I don't want to be alarmist — the fact that these things are allowed to continue on from year to year.

I'll give you an example. In the material you just sent to me — and I have to apologize because I just saw it as I sat down — I noticed a letter to Bob Franklin, the president of Ontario Hydro, on November 14, 1989, which is eight years ago. It talks about the renewal of the operating licence for the Bruce A station for one year rather than the usual two-year term: "This action was taken because we considered that the overall standard of operation and maintenance was only marginally satisfactory."

That was seven years ago when they were told, "You're not going to get your usual two-year licence; you're going to get a one-year licence," and I assume they gave you commitments that by 1995 all these things would be done, and they haven't been done. Not only that, in your presentation you say that even when they do present plans to correct the situation, they have been unable to transfer those plans into results. Is that a fair summary of what you said?

**Dr Bishop:** That's correct.

**Mr Kwinter:** The reason why I have concern, and I have two distinct areas, is that one of the mandates of this select committee is that later on we're going to evaluate the recovery plan that is being put forward by Ontario Hydro. Here is an agency, if you want to call it that, a



corporation, that has consistently shown that regardless of what they say they're going to do, they don't do it. Not only do they not do it, but they seem to be unable to do it. They probably have the best of intentions.

So there's the whole issue of credibility. How can you take anything they say with any semblance of acceptability when their record has been so abysmal? When I say abysmal, I listened to what happened and I saw your response. I guess it was Mr Harvie who responded, and the date of this is the 23rd of the ninth month, August. When you take a look at it and you see all the shortcomings, and by their own evaluation they are in the minimally acceptable — and as I said yesterday, it says that nuclear safety margins may be compromised when you're at that level.

My concern is, do you, as a regulator, have a greater responsibility than to just say, "Well, you're not meeting your requirements, but keep at it and we're going to give you a six-month licence and we're going to look at it again"?

**Dr Bishop:** There are two issues here. We look and demand that the operations are at the level where the margin of safety is still acceptable. When the margins of safety are still acceptable, the facility can be licensed under various conditions. We do not like to have licensees continue at a minimally acceptable level, still under the safety margins, year after year after year, not because safety is compromised for the six months we give the licence, or for the one year or for the two years we give the licence, but it's also indicative of, if you would like, safety culture attitudes at the facility. We have very high safety margins — very broad, very conservative. We would never allow a plant to operate when those safety margins are being threatened. Long before you are at that level, we would shut the reactor down.

AECB can keep saying, "You need to do better," because we get concerned about issues that today are long-term issues but we know they're going to become short-term issues down the road, but it is not our job to protect Ontario Hydro's assets. But we will never allow the safety margin to reach the point where we cannot say that they can be operated safely.

**Mr Kwinter:** A report was done by legislative research in 1991 and revised in 1997 looking at the Chernobyl and Three Mile Island nuclear disasters, if you want to call them that, and one of the interesting observations that was made was that there was an "It can't happen here" attitude where: "Everything is okay. Don't worry about it. Everything is under control."

There was a chain of events that created these problems. I understand that the technology is different — it's not CANDU technology and it's got a different system — but in both cases the findings were that the problems were a result of poor maintenance, poor training and a general attitude that, "It can't happen here because we've got the situation under control."

My concern is that we have a facility, and I think if you did a public poll — and this has nothing to do with whether you're a nuclear physicist or an engineer at a

nuclear plant — I would think that top of mind, if you asked somebody what would be the greatest disaster, they would say an atomic bomb, a nuclear meltdown, something of that kind. There's got to be a lot of public trust, and one of the things that has been shadowing nuclear energy is the concern people have about the potential of a problem.

To give you an example, in one of the comments in Mr Harvie's report, it talked about this foreign material exclusion. They found that some piping had rags or paper stuffed into it to prevent foreign material entering during maintenance while other pipes were left open. When you read the Chernobyl report and the Three Mile Island report, these were the kinds of things that led to the escalation of the problem and the whole sequence of events that finally had the problem.

It would seem to me that if you lived in Ontario — if you take a look at what happened in Chernobyl, the effect was certainly beyond the Ukraine; it went into Germany, it went into Sweden, it went everywhere — it would seem to me that the people of northeastern North America would expect that not only would it be absolutely safe but it would be absolutely foolproof, that every single thing would be done. To find that not only is it not done but that this facility is operating at virtually the minimally acceptable level, and the difference between minimally acceptable and unacceptable has got to be fairly short — I know you may say you've got safety —

**The Chair:** Can we get a question? We're short of time.

**Mr Kwinter:** — factors built into it, whatever, but could you comment on that.

**Dr Bishop:** First of all, there is not a very thin line between the margin of safety between acceptable and unacceptable. We never allow the margin of safety to get down to, as you were saying, a very thin line. Always the margin of safety under which we allow stations to operate is still very conservative.

You still can be operating in parts of the station at minimally acceptable levels, and because our standards from a regulatory point of view are so high, you still have an acceptable safety, but the operations in certain areas may be minimally acceptable.

**1630**

Remember, you also have to recognize the definitions of "minimally acceptable" that were used in the IIPA report. When you look at their minimally acceptable, they're saying they are substantially below industry standards but produce minimally acceptable results. In other words, the results are still being met, but for safety margins we have a very conservative margin. At the level that we would cut off, it's still wide. It's still very conservative.

**The Chair:** Thank you very much.

**Mr Kwinter:** May I just have one second?

**The Chair:** Mr Kwinter, you're way over, and I've indulged you already by almost four minutes, so I have to give that balance to other members now. I'll pick it up as

we go around. I'll indulge myself for just a moment before Mr Laughren takes off.

**Dr Bishop:** just some clarification, please, of your evidence so far. In response to a question that was raised a little earlier, did you agree that about 1,100 new staff were added to Ontario Hydro prior to 1992, and that those numbers have not declined since that point?

**Dr Bishop:** That's correct.

**The Chair:** In terms of the safety standards that AECB employs, could you give some indication to the committee of where those standards would fit in terms of a world context? I think specifically of France and Great Britain and the USA. Could you please very quickly give us that?

**Dr Bishop:** I think that they meet or exceed those same standards. Most of us in the western world do meet international standards. That's the minimum —

**The Chair:** So your response is that the AECB standards are at least as high or higher than standards anywhere else in the world?

**Dr Bishop:** Yes.

**The Chair:** By any measurement.

**Dr Bishop:** Well, I think that when you look at standards, there are international standards that are developed, and any good regulator is meeting or exceeding the international standards.

**The Chair:** In term of the length of licensing, is there any instance where the AECB has given any period of renewal less than six months?

**Dr Bishop:** No. I don't believe there has ever been one less than six months, but we can extend for a short period of time.

**Mr Harvie:** The only thing we've done less than six months is on occasion we have ordered reactors shut down. That's essentially —

**The Chair:** That would certainly be shorter than six months. All right. I have some other questions but I'll come back to them a little later on. Let me start the rotation again: Mr Laughren, and I will pick up in each caucus the time I allowed to go to Mr Kwinter.

**Mr Laughren:** Could I just pick up on the question the Chair asked, because there were some looks of puzzlement around the table about the numbers of employees. Could you reinforce that?

**Dr Bishop:** If I can, in 1989 there was an increase of about 1,100 staff, between then and 1992. In 1994 — this was when a cost reduction was occurring throughout Ontario Hydro, and the board at that time was very concerned that the number of staff would be decreased at the stations because of their overall cost recovery. We did not get a full assurance at that time that the commitments in terms of staffing and other things that had been made to the board would continue to be met, and particularly in staffing we then said that any reductions in staff would have to require our approval.

Now, there were changes in staffing that have occurred in between and have varied in station, and there may even have been over the last — I'd have to go back and look at the total numbers of staff increased. I can tell you there has been no decrease since that time. Staff have changed

in terms of their numbers from station to station, but I would have to look at the staffing figures to see how much of an increase there has been since 1994.

**Mr Laughren:** The reason I'm pursuing it a bit is because there were these buyout packages and a sense that because of the nuclear —

**Dr Bishop:** What we did at that time because we were so concerned about its effect on staffing was we also obtained assurances from Ontario Hydro, and they went on to fulfil those commitments, that some of the layoff packages would not apply to some of the very specific nuclear employees. That was of great importance to us.

Secondly, our other concern at that time was to make sure that people would not be transferred from other parts of Ontario Hydro into the nuclear area unless they were qualified for the job they came in to fulfil, so that we were satisfied that if there was an employee who was taking a retirement, they were being replaced by qualified workers.

**Mr Laughren:** Okay, but when you talk about the numbers, maybe I missed something here. You were talking about Hydro overall, or the nuclear division?

**Dr Bishop:** We did both. We looked at — no, we didn't at Ontario Hydro overall; we looked at Ontario Hydro Nuclear —

**Mr Laughren:** Okay. I think that explains my puzzlement anyway.

**Dr Bishop:** — and then at each station.

**Mr Laughren:** Okay. And it was in the nuclear division that there was not a decline in the number of employees?

**Dr Bishop:** That's correct.

**Mr Laughren:** Okay. I feel better about that.

**Dr Bishop:** No, we're not concerned with the rest of Ontario Hydro.

**Mr Laughren:** No, I appreciate that. Do you know if, when the IIPA, affectionately known as the Andognini report, was being done, they had access to any information that AECB would not have had?

**Dr Bishop:** I hope not, from the point of view of anything that is important to safety.

**Mr Laughren:** The reason I ask that question is that the IIPA — they decided that problems were severe enough to warrant the layup of seven reactors. Right?

**Dr Bishop:** The recovery required resources such that they would have to, the costs of recovery.

**Mr Laughren:** All right. That's a better way of putting it. Yes, you're quite right. So there was nothing you're aware of that they would have had that would have led them to any different kinds of conclusions than you would have come to?

**Dr Bishop:** From a safety point of view, no. That is correct.

**Mr Laughren:** From a safety point of view, right, and I appreciate that the financial thing isn't in your bailiwick.

To what extent is the AECB dependent on Hydro for its information, for disclosure? Because I know you have people in all the plants, or at least I think you do —

**Dr Bishop:** Yes.



**Mr Laughren:** — but I don't know what kind of access they have and how that feeds back to you versus you simply going to Hydro and saying, "This is what we need."

**Dr Bishop:** Well, the system works in several ways. First of all, we do have people on site and there are ongoing inspections occurring all the time. In addition, we frequently do special inspections where staff from head office in Ottawa also go to the stations. But finally, it also has to be recognized that we also require the licensee to report certain issues to us when they are issues that affect safety. It is a requirement that they do so. If they did not report something to us, for example, that was obviously of importance in safety, this would be a non-compliance in some of the areas. They must report certain things to us.

**Mr Laughren:** Does that include leaks into Lake Ontario, for example?

**Dr Bishop:** The which in Lake Ontario?

**Mr Laughren:** The leak of — what was it? Tritium and —

**Dr Bishop:** We are informed of most tritium leaks that occur. Jim, is there a cutoff level at which we are not informed, where the level's so small that we're not informed?

**Mr Harvie:** There is a level at which they are legally obliged to inform us, and in practice they inform us of releases quite a bit below that level.

1640

**Mr Laughren:** If there is something wrong in terms of safety either in the plant or in the community, whose obligation is it to make that public?

**Dr Bishop:** If there is something that is not safe?

**Mr Laughren:** Correct. Whether it's a tritium leak above certain levels or —

**Dr Bishop:** Oh, now that's different. Who is responsible? A tritium leak may still be safe. There are two questions that I think I'm hearing you ask.

**Mr Laughren:** Say that again. A tritium leak —

**Dr Bishop:** A tritium leak may still be within a safe limit.

**Mr Laughren:** Right. I'm assuming it's, as you said, above an acceptable level.

**Dr Bishop:** Yes, okay. Whose responsibility is it to inform the community? The licensee, when they know, should inform usually the liaison committees that are within the community. The community officials are usually informed by the licensee first. AECB will certainly give its news releases just as soon as it's aware. I think it rests with both.

**Mr Laughren:** So you would do that anyway?

**Dr Bishop:** When the information is known.

**Mr Laughren:** Are there any problems internally, the way Ontario Hydro is structured, that cause anguish at AECB when it comes to seeking information?

**Dr Bishop:** In the way in which it is structured? No, I don't think its structure gives us anguish.

**Mr Laughren:** What does?

**Dr Bishop:** Pardon me?

**Mr Laughren:** You're not going to get away with that answer. What does?

**Dr Bishop:** I think "no" is the answer to your question; I don't think there's any structural problem. Jim, would you agree with that?

**Mr Laughren:** Are there any other problems?

**Dr Bishop:** I think we have discussed some of them in my report in terms of it is a problem, it is a frustrating thing to see a utility, regardless of how many plans are put in, regardless of what efforts are there, if they are not able to show sustained improvement. So I think there are those issues.

**Mr Laughren:** Maybe this is an unfair question, but do you have any authority or is there anything in your mandate that allows you to say to Hydro, "Look, for heaven's sake, we're tired" — and these are my words, not yours — "of you having great plans but being unable to implement them, and we're going to insist that there be a new system of accountability here. It's to us that you're accountable, and this is how we want you to do it?"

**Dr Bishop:** As a matter of fact, that has been stated to Ontario Hydro, that it's not promises that we regulate on, it is results, and it is results that we need to see.

**Mr Laughren:** Are you able to share with us what you think needs to be done at Hydro in order to make sure that plans are implemented?

**Dr Bishop:** It is not AECB's mandate to say how it should be managed, so I would not want to get into a discussion of that. But I will repeat that the AECB does require results from whatever organization they go into.

**Mrs Johns:** Thank you, Dr Bishop. I spent part of the day today going through the annual reports of the Atomic Energy Control Board. I went back as far as 1983 for a report and was quite surprised to see that every year in each of your reports you have a discussion about the nuclear reactor segment, the nuclear facilities, and it starts pretty early that the reports start to talk about labour problems and continual problems and safety issues that come about. I just want to say that in the 1989 report, one of the things you say is that problems continue to persist in the training of operations staff and that the AECB is expanding the scope of its activities related to training of operating staff. So for a long period of time there have been training issues that the AECB has recognized.

There are a couple of questions I want to explore with respect to that. The AECB has inspectors at the facility, and Mr Laughren had started to talk about this. They have a responsibility to let Hydro, I guess, know that they're not up to a standard that's acceptable. I'm interested if you have a responsibility to the residents or the taxpayers or the people who live around these areas to let them know that they're not meeting specific objectives also. Is your role such that you have an ability to let us know, for example, when my family with two little boys lives close to a plant, that there's a tritium leak? How do I find that out as a resident of Ontario if the Atomic Energy Control Board doesn't tell me?

**Dr Bishop:** I think Ontario Hydro should certainly be informing the community, it's my understanding — and,

Jim, correct me — through the appropriate bodies within the community that there has been, say, a tritium leak. Not all leaks are anything of major concern. When leaks are of a major concern, there are two things that happen: Ontario Hydro also should be informing the department of health immediately, and we would be informed as well. The community absolutely should be informed, but through the appropriate community officials.

**Mrs Johns:** Just so I don't run out of time, I want to ask you this question first and then I'll come back to that line. Mr Kwinter started to talk about a credibility issue. He talked, and you talked, about Hydro being unable in the past — they'd say they'd correct something, and then they were unable to meet that. I see that through all the reports. They say they'll do something, and you come back a few years later and say: "Hey, you haven't done that. What's the problem?"

**Dr Bishop:** Yes.

**Mrs Johns:** Does the Atomic Energy Control Board have a comfort level with Carl Andognini and his team that they will do what they say they're going to do?

**Dr Bishop:** Once again, we are not going to make any prejudgements on whether they're going to succeed this time. We are going to be looking for results. Whether Mr Andognini and his team are going to be able to make the results to improve the overall issue, I don't know yet, nor will I make any comments about whether I think they can or whether I think they have a problem.

What I have said is that this is a horrendous challenge; this is a major job. If I said to you that Mr Andognini and his team have never undertaken any job as large as this, that would be so. But there would be very few people who had ever undertaken a job this large within a nuclear facility. These are huge facilities we're talking about. There is no reason for me to think that Mr Andognini in the past has not shown in any way a professional capability. That is not what I'm saying. But we're waiting and seeing. We are certainly not going to be making any statements as to whether we think they're going to be successful or not.

**Mrs Johns:** Would there be any other nuclear expert who would give you more comfort than Mr Andognini?

**Dr Bishop:** It is not a case of Mr Andognini. I want to make this quite clear. I'm not making judgements on Mr Andognini at all. I'm absolutely not doing that. What I am saying is that we have seen plans many times before; we've seen failure many times before. We are not at all into the job of making predictions as to whether they are going to succeed. We are saying we are going to need that success. You will also notice that we are saying we hope we will be able to develop a document that has time lines and other aspects within it that we can indeed put into a licensing condition, to have some of those milestones met.

1650

**Mrs Johns:** I know you've said that the standards you judge nuclear plants on are as good or better than anybody else's in the world. Are they the same standards as were used in the IIPA report?

**Dr Bishop:** There are differences, and I think this is very important. We do not take into consideration cost competitiveness. On the issues involving safety and environment we would certainly use very similar ones, but cost competitiveness is not one of them. They are different from that point of view.

**Mrs Johns:** I'm not sure exactly how this is happening, but I know the federal government is doing a review of the Atomic Energy Board and may be increasing their powers or looking at the powers. Maybe you can enlighten me on exactly what's happening there. Is that to give you a more far-reaching role, to be able to be more active in letting communities know what's going on, to allow you to have more of an ability to inform the public?

**Dr Bishop:** I'm sorry, I'd missed the first part of your —

**Mrs Johns:** I understand that the federal legislators may be changing the rules by which you are governed. Can you tell me why that's happening?

**Dr Bishop:** The act we are now under, the Atomic Energy Control Act, is a 50-year-old act. Although it was broad and allows us the authority to regulate to the extent that we need to for safe operation, it needed very much to be updated. The new act we hope will be in effect by the fall of 1998. It gives us better legislation backup for some of the things we are doing. It also improves some other things that we could not do right now. For instance, if we were to prosecute, today we can't have a fine of more than \$5,000. Well, that's a pretty meaningless situation to Ontario Hydro. It will be going up to about \$1 million.

We are going to have better-defined powers and authority — better defined. It doesn't mean we don't have the authority to do what we need to do today.

**Mrs Johns:** Can you give me any reason why you believe the previous boards of directors, from 1983 on, haven't been able to satisfy your queries? Is there some specific issue that has stopped them from being able to meet the changes you've recommended or the training or any of those issues? Do you think there's one or a number of issues?

**Dr Bishop:** A number of issues has led to this, and it's not simply the Canadian plants either. One of the things you have to remember is that when this industry was young, when there were new plants being built, these were pioneers, and the work was mainly directed towards design and safety analysis from the equipment and design point of view. Then, as a plant begins to age, it switches over into the operational and the maintenance phase. That requires a whole other type of approach. I don't think there's any one factor at all. Exactly like many other industries that were new, with new technology, this is basically what happened in the nuclear industry in many areas.

**Mr Conway:** Well, Dr Bishop — you are Dr Bishop. You're a medical doctor, as I understand it?

**Dr Bishop:** Yes, I am.

**Mr Conway:** I have been very impressed by your testimony. I say that because about 18 years ago I sat in this room and rooms around here through several months,



actually several years, of legislative inquiry into Ontario's nuclear commitment. I still remember the colour and quality, which was very good, of AECB presentations: John Jenkins, but most especially Ziggy Domaratzki. But Domaratzki at his best was never as direct, as blunt and as forthright as you have been here today, and I really thank you for that. Like other committee members, I've been going through this absolute gold mine of paper that you have placed before the committee, and I regret that we just didn't have much time to go through it before we met today.

Let me begin my questions with some very specific points. I want to go back to the sequence of events from, let's say, 1993 through to 1997, but it could just as easily be, thanks to the material you've provided us today, from 1986 through to 1997. It's very clear from reading AEC documentation, particularly from 1993 onwards to 1997, to the publication of the so-called Andognini report that the federal regulator is getting increasingly frustrated with the failure of Ontario Hydro Nuclear to do what it has promised to do around safety, the management changes, operational standards etc.

With that as background, now I focus in very sharply on the period between, let us say, December 1996 and August 1997. As you've indicated, there was really nothing qualitatively new in the Andognini report, relative to what AECB had been saying, save and except some of the economic issues that would concern the utility.

I want to know two things. In 1996, when the federal regulator, under your leadership, took the almost unprecedented measure to restrict the license renewal for Pickering GS to six months, which is what you did for the reasons you've given, my first question is, how close did you come, as a federal regulator, to shutting Pickering down because of the long-standing problems to which you've made much reference this afternoon?

**Dr Bishop:** You have a choice between six months or shutdown. I'm not going to go through how close that is, but I will say to you —

**Mr Conway:** My question is specific: How close did the AECB come in the fall of 1996 to simply shutting Pickering down because of the problems that had been long-standing and substantially unresolved?

**Dr Bishop:** Let me answer that by saying that if there had been no improvements seen between August 1995 and December 31, 1996, we wouldn't have hesitated to shut them down.

**Mr Conway:** Did you come close to doing that?

**Dr Bishop:** Yes. When you give a six-month license, you're coming very close to shutting a reactor down.

**Mr Conway:** All right. That's December 1996. You've impressed me as a no-nonsense regulator. You just create the impression of being a fairly businesslike person who means business. Having said that, you've just given some testimony around your mood in December 1996. Let's move forward three or four months. It's now April 1997.

These people — Mr Laughren and I were just going through this. There's so much incredible material in this

binder. One of the several that I like is the one from November 1991 where Elgin Horton, top dog in the nuclear division, together with Marc Eliesen and the AEC — there's a meeting. Horton is quoted in your documentation as admitting to being humiliated at their ongoing problems in 1991. Now we're at April 1997. You have come very close to shutting Pickering down in December 1996. It's April 1997, and on April 16, the now top dog at Ontario Nuclear, the three-hatted Carl Andognini — he is at this point the vice-president and head of nuclear operations, he's the outside consultant brought in, and he's also in the process of the recovery plan.

1700

But Carl Andognini as the executive vice-president and chief nuclear operator, on April 16, 1997, writes you, Mr Harvie, the director-general, right?

**Mr Harvie:** That's correct.

**Mr Conway:** Four months after the events of December 1996, this letter is written in response to your letter of April 11 relative to the renewal of the operating licence for the Pickering nuclear generating station. Quoting directly from the letter: "Ontario Hydro's corporate position is that the Pickering station units are safe for continued operation for the following reasons...." and he goes on at length to explain why they're safe.

Then he makes the point, quoting from the second-last paragraph of the letter: "Therefore, in keeping with Ontario Hydro Corporate management's mandate, involvement, action, and the continuing progress being observed at the Pickering stations, Ontario Hydro respectfully requests a five-year operating licence for the Pickering station."

My question to you is, how loud did you laugh? How loud was the laughter at the AECB for the chutzpah of this letter and this request, coming but weeks after the event that Dr Bishop so clearly described a few moments ago?

**Mr Harvie:** I'm not going to discuss laughter. I think we try to do our job in a professional fashion. I would acknowledge we did not spend very much time considering whether to recommend the five-year licence.

**Mr Conway:** Dr Bishop, as the chair of the Atomic Energy Control Board, did you then and do you now consider, in the light of the events that had been ongoing since 1986 through to 1997 what a lot of regular folks would consider, that this was at the very least, a remarkably brazen request for these people at Ontario Hydro Nuclear to make to you?

**Dr Bishop:** We do not look at things as brazen or non-brazen in our decision-making. We look objectively in terms of what is placed before us.

**Mr Conway:** Now you're being very diplomatic, and I appreciate that. But I'll tell you, given what you've just told us about the circumstances in December, boy — well, you've answered the question.

Let me now come back to a more general question. You look at this material. Any reasonable person going through this material — 1987, 1989, 1991, 1993, 1995, 1996, 1997 — says to themselves, what is the problem? A

certain William Farlinger CA had a press conference when he released the IIPA report a few weeks ago, and he said: "The real problem was that there's this cult running this place. That's a big part of the problem."

You're the watchdog, the people Ms Johns's constituents and mine have as our protector. It is not a very comforting thing to have the person running this operation tell the community that a big part of the problem is this cult.

What I want you to address in the next question is, looking at the period of 1986 to 1996, like the heavy drinker who is always going to take the pledge and does take the pledge and then falls off the wagon, these people at Ontario Hydro Nuclear kept falling off the wagon. They could never keep their promises. Why couldn't they? The chairman says it's a cult that's really one of the root causes. What would you tell the people of Ontario, from your considered opinion, is the problem at root cause here? Why couldn't these people over this period of time not keep their commitment to improve their operational performance and their safety standards?

**Dr Bishop:** First of all, I wouldn't use the word "cult" in terms of looking at this. I began to refer a little bit before, without making judgements and details about management, about moving from the design adjustment stages in terms of new plants, moving from the excitement of a new industry and a new plant into an operation and maintenance phase. That requires a different way of management, and I'm not quite sure that this occurred, that the movement into a maintenance and operation area occurred. I don't think it's unique to the nuclear industry; I think it happens in many industries.

We know there were many difficulties through several areas, whether it was from human errors, poor management, poor maintenance. I'm not going to be able to come up with any one or two or three major reasons they were unable to meet their commitments. I would say one thing: It appeared to us that they did not sometimes look at the plans they had in effect — and their plans were acceptable — and whether they were beginning to fail to look at the root causes of why they were failing before they went to a new plan. That was another thing that had occurred. But the majority of this is based on management difficulties and poor maintenance, as well as human factors.

**The Chair:** Just to pick up on one question, Mr Conway's question to you indicated that Mr Andognini, asking for the five-year renewal, referred specifically to "in light of continuing improvements." The question to you and/or to Mr Harvie is, was there in fact any evidence of continuing improvements for the months preceding that letter?

**Dr Bishop:** Yes, and that is why the board increased it to nine months in June. That's not a very big increase, but there were enough to be able to do that. That's important, because if there were not, we would not be looking at six months twice in a row.

**The Chair:** While there was perhaps some bemusement by the length of the request, there was indeed some

evidence that seems to suggest there was some merit in action taking place at that point.

**Dr Bishop:** To increase it by three months, yes.

**Mr Laughren:** Dr Bishop, I made the mistake of starting to read this briefing book. Like they say, you can't put it down. I was noticing that back in October 1992 — maybe this is not the first letter; I may have just picked it out, and maybe there are ones earlier than this. I don't know. Mr Lévesque was your predecessor, was he?

**Dr Bishop:** Yes.

**Mr Laughren:** In this letter he talks about the reduction in staff in the nuclear division. This letter is written to Mr Eliesen, who was the chair of Ontario Hydro at the time. He says he recognizes that "fiscal measures are necessary" but he wants a response back so that Mr Lévesque can report it in November. This was in October 1992. Then Mr McManus, who was secretary-general of the AECB — does that person report to you?

**Dr Bishop:** Yes.

**Mr Laughren:** — asked again for specific comments on quality improvement and adequate resources and wants yet further commitments to comply with that.

Then in December 1993, Mr Domaratzi asks for more specific comments — I'm in section 15 of the briefing book at this point — for even more, and says, "Senior management of Ontario Hydro made a commitment to our board to increase staff levels by 1,100 persons to deal with maintenance backlogs etc." That's back in 1993. That's by 1,100. Then in October 1994, Dr Bishop, you said, "You should be aware that the board staff is concerned that additional cuts in Hydro's staff could have a significant and undesirable impact on nuclear safety." So we've gone from 1992 to 1994 with the same issue of the number of staff in the nuclear division. Then it goes on and on right up until 1995 at least and perhaps beyond.

1710

I couldn't help but wonder during all this time — there are three years right there and maybe it's longer. I don't know that for sure from a quick look at this briefing book. At what point does the AECB say, "Look, this is intolerable; we're getting overall these bland assurances from Hydro"? But as you said in your opening comments, they're not delivering on those overall bland assurances, if I can put it that way. At what point can you get tough in your mandate?

**Dr Bishop:** As you will read in there, in 1994, because we were not getting commitments — that will be on page 7, chapter 2.

At any rate, when we were not happy that we could count on the commitments being filled in terms of staffing, we then required Ontario Hydro to receive approval from AECB for any reductions in staff at the nuclear plants. In other words, we weren't getting the commitments we wanted to get and we therefore made it a requirement.

**Mr Laughren:** Did they ever hire the 1,100 extra staff that I think you had suggested or they had agreed to?

**Dr Bishop:** Yes, they did.

**Mr Laughren:** It was actually done?

**Dr Bishop:** Yes, they did.



**Mr Laughren:** Okay. Then those numbers were not impacted by their restructuring, if you will, in the early 1990s?

**Dr Bishop:** They were not impacted in the positions that we felt were absolutely essential to run. There were clerical issues and so on that employees may have been changed. We wanted to make sure that workers from other parts of Ontario Hydro who would have seniority and would normally be able to bump — that the same ability to do that was not going to take place and that we were not going to be getting inappropriately trained and inexperienced people working in the nuclear plants, where it mattered. There are lots of jobs at the nuclear plants that can be transferred from fossil fuel plants to the nuclear plants.

**Mr Laughren:** The people who are employed by AECB and work in the nuclear plants — how many of them are there, by the way, in each —

**Dr Bishop:** At each plant? Jim, I'll have to pass that over to you.

**Mr Harvie:** I believe there are nine professionals at Pickering, eight or nine at Bruce, between Bruce A and Bruce B, and five positions at Darlington as professionals, plus secretarial help.

**Dr Bishop:** And about 200 at Ottawa who back up their activity as well.

**Mr Laughren:** Right. On a regular basis they simply report directly to you. They don't have any —

**Dr Bishop:** No. They report to their directors and their directors to Jim.

**Mr Laughren:** Sorry. I meant that they report to AECB.

**Dr Bishop:** Yes.

**Mr Laughren:** Do they liaise at all with Ontario Hydro?

**Dr Bishop:** They must liaise with them in terms of many of their inspections and activity and working out issues, technical or otherwise. You must work with the licensee in terms of that.

**Mr Laughren:** As far as you know, is there a good relationship between AECB folks and Hydro Nuclear Division folks?

**Dr Bishop:** A good relationship?

**Mr Laughren:** Yes. Cooperative.

**Dr Bishop:** Jim, I'll let you answer that.

**Mr Harvie:** I think there is a good, professional respect between the Ontario Hydro people at the sites and our staff at sites. We do of course try to keep a certain arm's-length relationship with them, but I think there is perhaps a grudging respect.

**Mr Laughren:** Do you move them around so they don't get too friendly?

**Dr Bishop:** We have not. We are looking at the possibility of moving our employees who are at site around. We do not have any evidence of encapturement of those who are at site. The other thing you have to remember is that they are continually also being aided and increased by the head office staff, and decision-making in things like licensing and so on is not made by those inspectors.

**Mr Laughren:** Do you know or would you venture a guess to what extent the problems of the staffing levels in the nuclear division have been responsible for the low level of performance at those stations?

**Dr Bishop:** I wouldn't want to say that numbers were the major cause for performance.

**Mr John O'Toole (Durham East):** Thank you, Dr Bishop. Mr Conway complimented you earlier on the deftness of your answers, and I'm pleased to say you're a scientist, not a politician. That was very well demonstrated in your response.

On a lighter note, in your role at the AECB you obviously, I gather, monitor the plants in Quebec and New Brunswick as well. A simple starting question would be, is there a similar kind of concern or are there the same kinds of, if you will, cultural implications? Are there any comparisons? How do we rate with them?

**Dr Bishop:** We don't necessarily like to look at comparisons, because they're different.

**Mr O'Toole:** Right.

**Dr Bishop:** Have we seen some difficulties that are similar to those we have seen in Ontario Hydro? The same in-depth difficulties are not there yet, but yes, we have seen some evidence of similar problems having occurred. But it's very difficult to compare one plant to another or to compare a 21-unit with a one-unit —

**Mr O'Toole:** You use common standards, I gather, that both international and domestic are applied in those places and that's appropriate.

**Dr Bishop:** Yes.

**Mr O'Toole:** I want to dwell on the remarks you made in your introduction that suggested — Ms Johns mentioned it as well — that starting in the early 1980s there was some deterioration, and you mentioned that Bruce A in 1986 is where you first really documented it. The responses I've read, like some of the documentation included, suggested there was a decade, approximately, for Hydro to responsibly respond. I guess they set for themselves a time line of 1995-96 to actually address the structural, mechanical or human situation. Did they do that? I guess this has been asked several times. I have an ulterior motive, obviously.

**Dr Bishop:** If I understood your question, did they begin to try to address these problems in a short time after AECB pointed this out?

**Mr O'Toole:** Yes.

**Dr Bishop:** They acknowledged it. They put in a plan in 1989 called the quality improvement plan; that failed. By 1991 it was obvious that had failed. Again we pointed out our unhappiness with that. They would respond by acknowledging that and would create a new plan.

**Mr O'Toole:** Mr Conway made the analogy of the drinker who has trouble quitting. I guess this is really my question: There was a decade there of pretty well chronologically arrived-at commitment. Was there any action taken by AECB to finally stop making excuses or allowing this process to continually fragment?

1720

**Dr Bishop:** Our mandate and our licence are through our licensing process. As long as we are meeting that safety margin, we can license. Yes, we can do a requirement, but we can't suddenly say, "You stop threatening your assets for four years down the road," except for those issues that are related to immediate safety. Does that explain —

**Mr O'Toole:** It does. You said there's a margin there and it's a pretty conservative margin. Objectively, scientifically you go in and quantify this thing and say, "Yes, it meets," or "It doesn't meet or exceed these standards." But in the overall context, everyone addressed it.

The citizens both in Durham, where I live, and elsewhere in Ontario need someone who is objectively removed, at arm's length — you used that phrase — to comment. I suspect that the new federal legislation may empower you to — I'm somewhat disappointed that you can't. You've been very forthright today, perhaps more than your normal mandate, to err on the side of safety, I suppose. I'm not saying you don't, but I suspect that even if I look at Pickering — the town council there is going to put on the referendum this year the whole issue of the nuclear problem. It's a very serious community concern.

All that is happening in a context of this forced reduction plan. I have your assurance that, at least it sounds like, none of the nuclear people were displaced or they were replaced by a competent person. When I read the IIPA report, I think some of it is the power of the union itself, the power workers saying, "These are the bumping rights." Is it the proper place to resolve those management issues? Is Hydro able to make the changes in the culture, if not in what Mr Farlinger called the cult — I think it's more of a cultural issue. Is that the difficulty?

**Dr Bishop:** Changing the culture of any organization is difficult to do and it takes time, but that's only one of many things.

I would point out again, that, when we do licensing and information to the public all our meetings are public, all our documents are public, so these issues have been before the public and known to the public.

We can't force excellence on to a utility. That we cannot do.

**Mr O'Toole:** Just a final question, if I may: Moving that culture from a design-build kind of approach to an operate-maintain, has that happened? Have the particular processes and procedures changed to that significantly, in your opinion? I know those are operational. It's been mentioned a couple times here, moving from that mentality; has that happened?

**Dr Bishop:** There has been some switch in some areas with some groups, but there is still a need to go further.

**Mr O'Toole:** Would you characterize that as culture or cult or any of those kinds of words or are they just words, perhaps poorly chosen words? Is that really some of this human resource issue problem? Is that the switch in role, in duty?

**Dr Bishop:** If you're talking about safety culture within a plant, that's an attitude, in addition to other issues.

We are very interested in licensees having the appropriate safety culture, because only if you have the important safety culture can you really drive some of the issues that need to have improvement.

Management can buy into things, but if that can't be transferred down to the main-line activity, then there are difficulties.

**Mr O'Toole:** Just as a last question, you mentioned in your remarks that there were some 400 safety-related items in the IIPA report. In a bulletin from your board, none of those 400 was anything you didn't know about. That's what I heard you say, no surprises.

**Dr Bishop:** There were none of the issues in a general sense that we did not know about. We might not have known a certain bolt was not on a certain thing, but we knew about the issue in terms of poor maintenance in that area.

**Mr O'Toole:** Did they have recovery plans? If you had as an ongoing audit function by AECB in the plant noticing bolts missing or maintenance routines not being performed, had there been corrective action plans taken and filed with Hydro on a regular operational basis? That's how it happens long before you do the big, sweeping licensing process. Is there a corrective action plan for an incident report? For all 400 of those, if you knew about them, there would be corrective action plans, I guess.

**Dr Bishop:** Some of them are issues that don't require action now; some of them do in the short term. In part of the review that is going on over all 400 are things like: "Has this been corrected? Has it not been corrected? Does it need immediate action? Does it not? Is it important for safety in the short term or is it important for safety in the long term?" That, again, will be completed by November 13 for the final issue. I think in BMD 97-167 you will see how we are approaching this particular review.

**Mr O'Toole:** I prefer to look at those incident reports again. I look at the overall IIPA report, and that's the big mother ship, if you will, but on an ongoing basis there must be a strategic plan. How thoroughly did they actually address the corrective action strategy that your inspectors onsite note daily? I suppose they must do random checks of various processes. Are they responsive in fixing them or is there a lethargy in training or travel or maintenance?

**Dr Bishop:** Jim, would you like to make some comments on the day-to-day process?

**Mr Harvie:** The sort of problem we've recognized is backlogs of maintenance. I wouldn't like to give the impression that we had a list of all these 400-odd shortcomings. We knew there was a large backlog of maintenance. The IIPA would then say, "This particular valve has not been maintained for such-and-such a time and it should have been." The finding is the same but we did not necessarily know about that specific valve.

We have told them to reduce the backlog of maintenance, and sometimes it would reduce for a bit. Then something would happen and it would go back up again.

**Mr O'Toole:** Since about 1984 that's the way it's been, a large cash hog.



**Mr Kwinter:** Dr Bishop, thank you for providing us with the briefing material. I want to just quote from a report that was made to the board by your predecessor, Mr Lévesque. Just by coincidence, it deals with a meeting that was held six years ago to the day from today, October 7, 1991, where the chairman of Hydro, Marc Eliesen, was meeting with the president. He says in his report to the board:

"...the president of AECB expressed the frustration of the board with respect to the performance of all stations, performances which in some cases seem to be deteriorating instead of improving as continuously promised by Ontario Hydro, with no apparent results." Then he goes on to say: "The situation of Darlington was used as an example of that situation. In the context of the QIP — quality improvement program — "one would expect that a new station" — and this was a station that just opened; it cost \$13 billion — "like Darlington would be exemplary and be an indication of what one should expect in the future. In fact, the contrary is happening. After a very short running time, Darlington is already joining the ranks of the other stations with maintenance backlog increasing, operating procedures not being strictly adhered to etc.... The president indicated to the chairman that the board was not ready to continue for very long to accept excuses and promises of improvement and continue to issue licences, unless more rapid changes occur."

My question to you is, how long is the board prepared to wait? This was exactly six years ago today. I would appreciate your response.

1730

**Dr Bishop:** If there are not improvements and they are affecting safety, there's no question that we will not continue to issue licences, if the stations reach a point in their deterioration where the safety margin is not as conservative as we require it to be.

Now, it's one thing to begin accepting a plan at the beginning of 1989 and saying, "They've got a good commitment," and so on. I have attempted to keep saying to you that it is not promises we're looking at; it is results we're looking at. We are not making judgements on Ontario Hydro's promises; we're making judgements on the results that come out from their plants. The board is not saying, "Ontario Hydro promises, therefore we accept that they're going to fulfil that promise." That is not what we're doing.

**Mr Kwinter:** It would seem to me that there's something drastically wrong at Ontario Hydro when a brand-new facility that has just come on line, has just been commissioned — well, this was in October 1991; I don't know the exact date that the commissioning took place but it certainly was in months — already is showing examples of this sickness, if you want to call it that, that permeates the whole operation of the nuclear facility.

It can't be as in the case of maybe Pickering where you say, "We've got limited resources and we have to allocate them and we will get to it." This is a brand-new facility and it had already fallen into that pattern, which indicates

to me that there's a very serious problem with management.

**Dr Bishop:** Absolutely.

**Mr Kwinter:** And if management can't control this thing, my question is, why hasn't somebody done something about it, to turf them all out and get people who can run that facility?

**Dr Bishop:** It's not AECB's mandate to manage the plant. It is within our mandate to point out if there are problems, but we do not manage.

**Mr Conway:** I want to pick up on that, Dr Bishop, because before coming today I spent some time reading your reports on the Ontario Hydro nuclear reactors from about 1993 onwards. There's a very interesting pattern here. You document overall a steady decline in performance, with some blips here and there, but it's trending downwards. These reports are as nothing compared to the material that you've provided today. The papers in those binders of yours are devastating, because, as Laughren and Kwinter and others have said, if the average person reads that, follows that paper trail from 1986 through to 1997 — and you testified earlier this afternoon, this is a key point, correct me if I'm wrong — that Ontario Hydro is telling you, as the regulator, that they're laying up seven of their 19 reactors, not because they can't continue to operate safely but because they don't have the resources to manage them, or words to that effect.

**Dr Bishop:** No.

**Mr Conway:** Be clear on that.

**Dr Bishop:** Yes. My understanding of what they are saying for the reasons they are closing is that they are not closing them for safety reasons but to be able to initiate a recovery plan which is going to be very costly. They must take the resources they have and put them into the other 12 plants. Again, it is not AECB's responsibility to tell them whether they lay up or they don't lay up.

**Mr Conway:** I understand that. But one of the key points for me as I go through your documents today is that it's hard not to come to the conclusion that from about 1992 onwards, even before, there is a high level of concern at the AECB about the impact of cuts at Ontario Hydro Nuclear; and I suspect as well delayed or deferred maintenance. There's all kinds of documentary evidence in here that there's an ongoing, deepening concern. A layperson would look at that and say, "Those cuts must have had some effect on the ongoing problems at these plants." That would be a reasonable conclusion.

**Dr Bishop:** Yes. It would be reasonable to say the decrease in resources could have had an effect on those plants.

**Mr Conway:** But I come back to my fundamental question, because you're our regulator. As Mr O'Toole said, if you're living out in Port Darlington or up in Tyrone out there in Durham region, you've got to believe that there's somebody like you saying, "Surely to God they're keeping an eye on these people." I'll tell you, if I live in Durham region and I get this book, I'm not going to be a very happy camper. I'm going to think that a lot of politicians — I certainly wouldn't believe what Bill

Farlinger said. Farlinger went running around on August 13 saying there was a cult. Well, it's baloney. You people were telling Franklin, you were telling Eliesen, you were telling the whole senior crew, including Kupcis, who's going to be here tonight, that there were real problems.

In 1991 we had no less a person than Elgin Horton, according to your document, admitting to being humiliated at their problems of not being able to do what they said. So my question remains, from your point of view, what do we need to recommend to make good intentions become better results?

**Dr Bishop:** Okay, let me say, number one, we were also telling the public at our meetings what was going on. It wasn't that there weren't documents and that these issues weren't being discussed at our public meetings. I want to make it quite clear that we were not hiding anything in terms of the public. That information was available if people wanted to really take a look at it.

Number two, you still have to distinguish between safety margins — less than optimal performance. I'm now speaking from the mandate of the board. The mandate of the board is to make sure that safety margin is there. We like to see licensees operating in as excellent a manner as possible and not just meeting the safety margins that we require. But it is the management of that utility which has to have the responsibility for managing and for the corrections that are required. AECB cannot manage Ontario Hydro.

**Mr Conway:** But what do we need? Your documents make plain that they've got all kinds of good plans and good intentions. It's just that it doesn't produce the results. I am a citizen of Ontario and I'm expecting that — you've told us today you got close in December 1996 to closing down Pickering GS. People are going to hear that. Six weeks ago they saw Ontario Hydro getting up in a fashion of self-criticism that would have impressed or embarrassed Mao Tse-tung. I mean, they said, "Every criticism the anti-nukes ever made about us is basically true."

**Dr Bishop:** What I'm trying to do, Mr Conway, is keep within my mandate.

**Mr Conway:** And your mandate is —

**Dr Bishop:** It is not my mandate to manage Ontario Hydro.

**Mr Conway:** Agreed.

**Dr Bishop:** It is not in my mandate to tell them how to manage. It is within my mandate to make sure that they're keeping that safety margin. But it's not up to AECB to tell them how to run their utility appropriately.

**The Chair:** Thank you very much, Mr Conway. We have done the round. There won't be sufficient time to do the protracted questioning as we go around. There will be time for perhaps one question per caucus. I think we may want to move in that direction to start with so we at least keep close to the time to move up.

I would like to ask a question, Dr Bishop, before we proceed any further, to pick up on some testimony you have given. Going back to the plants that Ontario Hydro has given up for the recovery plan, to your knowledge, is each and every one of them in a safe condition?

**Dr Bishop:** Yes.

**The Chair:** I want to be very clear: There seems to have been some response by Ontario Hydro to your stick, at least in 1996, where you took them from a six-month to a nine-month license.

**Dr Bishop:** Yes.

1740

**The Chair:** But I pick up a concern about what seems to be a litany of inability to respond to directions by AECB over at least a decade, if not more, and some frustration that comes through in your reports. Does that reflect itself, in your sense, in terms of competency?

**Dr Bishop:** Of Ontario Hydro?

**The Chair:** Yes.

**Dr Bishop:** It's not the competence of Ontario Hydro to be able to improve its level of operations. We have not seen evidence that they have been able to do that on a sustained basis. I will also tell you that if you look, say, at Bruce A, a one-year licence in 1988 and a one-year licence in 1989, and then it gets a two-year licence, and then suddenly in 1992 it's back to a six-month — I'm just using this to illustrate that there is an ability to sometimes make improvements but then an inability to sustain them.

**The Chair:** Final question: Is this a pattern that is reflected anywhere else in the nuclear world?

**Dr Bishop:** Yes. It is not an uncommon pattern.

**The Chair:** So it's not unique to Ontario Hydro?

**Dr Bishop:** No, it is not.

**The Chair:** Thank you.

**Dr Bishop:** I would just like to make one correction over the answer on Bruce A, on the generation tubes.

**Mr Harvie:** On the statement that all the reactors are currently safe to operate: At present all the Bruce A reactors are shut down because of problems with their steam generator tubes. It is not clear that the state of the steam generator tubes currently is such that they could be started up.

**Dr Bishop:** We can tell you that we believe all of those that are operating to be safe. But these may not be restarted; they are all down now.

**The Chair:** Thank you. Let's do a very quick walk-around, about three minutes per caucus.

**Mr Laughren:** Dr Bishop, I appreciate the fact that in your mandate you don't tell Ontario Hydro how to do something, you just tell them to shape up or shut down, basically. If they don't meet the standards, then you have the authority and the power to order them shut down. It seems to me that part of the process must be a learning exercise in dealing with Hydro, or any other. This committee is preoccupied at the beginning of our hearings — and this is just the beginning — with how we got here. We're jumpy about saying to Hydro, "You got us here; now we trust you to get us back to appropriate operating standards." I'm wondering if you could share with us what your thoughts are on how Hydro got to the situation they are now at where they are going to shut down seven reactors, how standards are minimally acceptable and how you almost shut down Pickering and gave them only a six-month licence, all of that. What have you learned from



this exercise with Hydro? It seems to me that would help Hydro and you in the future as we struggle through this.

**Dr Bishop:** I think that I could probably answer that question in several different ways. Certainly if a utility or a facility is not looking at preventive maintenance from the very beginning of the time it starts operating, that eventually leads to a problem of being able to have the facility last the length of time it should; in other words, aging, which we're into now. I think all regulators everywhere now would say that looking after aging, or preventive maintenance, has to begin at the beginning. Everybody is saying that at the moment. But we would still go back and say that the shift in what was required of management from the beginning and once you go into a maintenance and operation phase, for whatever reason, did not occur.

**Mr Galt:** Dr Bishop, I very much enjoyed your presentation and the responses I've been hearing. Reading the IIPA report and following here this afternoon, a very significant portion sounds like it relates to human resources. We're not hearing too much about the mechanics of it, and it sounds like we have some pretty good hardware, especially at the Darlington plant. We've heard all kinds of comments made in relation to the human resources there, some not very complimentary.

In your opinion, are we seeing a numbers problem here? We read things from people being laid off through to unions demanding that tremendous numbers of people be off on union time. As you read through the IIPA report, we see a cultural problem, everything from contraband and not being able to inspect for that kind of thing coming in, as well as training. If those kinds of things were overcome, would we end up with good operating units? Or is it more than just those kinds of things in the human resources?

**Dr Bishop:** If you ended up with bad management in spite of all of that, you'd still have a problem.

**Mr Galt:** So it's at all levels — numbers and bad management, the whole works, at management level?

**Dr Bishop:** Multiple problems are there. You can throw whatever money you want at it, but without appropriate management, you won't —

**The Chair:** I have to break in. I'm sorry, but we're down to about three and a half minutes now and we're being called. At this point, Dr Bishop, the members have to go upstairs to vote, they have to be there within three minutes. Is there something you feel so —

**Dr Bishop:** Yes. I just want to say that briefing book was not made specifically for this committee, but we felt it would be helpful to you. That's all.

**Mr Conway:** It's helpful.

**The Chair:** It's very helpful. Dr Bishop, I want to say thank you. I know that some members of the committee have expressed interest in asking you to return when they've had a chance to digest what's in the book and the testimony you've given today. So I hope you would be gracious enough to consider a return invitation where required.

**Dr Bishop:** Yes.

**The Chair:** I would like to thank you and your colleagues for being with the committee today. We will now stand adjourned until 7 pm. I'll remind the members that we will meet at 6 o'clock in the dining room and then back here at 7 o'clock. Thank you.

*The committee recessed from 1748 to 1901.*

#### ALLAN KUPCIS

**The Chair:** The committee will come to order, please. Representatives from all of the caucuses are here, so we will continue. I welcome as a witness this evening Dr Allan Kupcis. We appreciate your attending upon the committee. I've been advised that there is no opening statement, Dr Kupcis.

**Dr Allan Kupcis:** That's correct.

**The Chair:** We will begin immediately with questioning. We'll start the questioning with the government members. I do want to say thank you for being with us.

**Dr Kupcis:** Thank you. Clearly I'm here to be helpful and not argumentative, and I hope I can be.

**The Chair:** In that spirit, we'll proceed with the questioning.

**Mr Galt:** We did get into this meeting quickly, didn't we? Good evening.

**Dr Kupcis:** Good evening.

**Mr Galt:** Thank you very much for coming. I don't know whether to compliment you on being a hero, some might say a coward, to resign and walk away, but let's recognize you as a hero in recognizing a problem and resigning and leaving the organization.

Many things happened there, and as you read the IIPA report, we see that an awful lot of it relates to the human resources at the plants collectively versus the hardware that's in those plants. It hardly mentions any problems with the hardware. We identified this afternoon that in Darlington immediately after it opened, a brand-new plant, it was rated rather low according to the AECB.

I'd like for quite a while, anyway, at least as long as I have, to probe around the human resources, whether we're talking training problems, whether we're talking a culture. I read in there where they can't search people coming in. They can bring in almost anything they want to bring in. I also read in the report that when it comes to having people on the job, granted some were laid off, but a tremendous number, I get the feeling, are away on union duty. I'd just like to try to get some feeling. The chair referred to it as a cult problem in the organization. Maybe that's a nasty four-letter word, but that was used, one that we remember from last August. Could you open and discuss some of these human resources problems?

**Dr Kupcis:** Certainly. Yes, I'd like to do that because, as you mention, in reading at least the executive summary of the IIPA report, clearly in the listing of grievances and issues that were found there I would qualitatively guess you're talking about 75% of the issues that were raised in the report relating to human performance and behaviour.

In a sense, perhaps it's opportune for me right now to state that in launching into the investigation to start with

and bringing in people to do a very disciplined look under almost a formula basis of understanding the depth of problems we have in Ontario Hydro, one of the issues of concern for me in doing that was to see if we in fact had lessened the safety margins from the design basis point of view. What I mean by that is whether we really knew any more, with all the changes in the plant with the hardware and the design changes that had taken place during just the normal course of operation, whether we had the safety margins on the design basis.

Why that's critical is because it's the design basis safety margins which establish the regulatory licensing of those plants. If those safety margins are impaired to any degree, then clearly a shutdown is required of those plants to fix those issues. That relates to hardware issues. So that was the core of the kind of process that we brought in through the IIPA to try to understand if in fact the design basis had been impaired.

The investigation over the course of time established that while there were indeed a few examples — they went through some of the plants in that vertical slice through their safety systems and they uncovered some issues that needed immediate attention and were attended to — overall the plants from a regulatory licensing point of view were safe to continue operation, even though they were rated minimally acceptable. Thus the whole issue around, why is there this continued frustration and aggravation in the company, in the board of directors, in the senior management about the performance of those plants? What is it that's driving that?

We — clearly I did and the board, the nuclear review safety committee of the board — had a qualitative sense for at least two years before we brought in the team that there were some issues around safety culture in the plant relating to an entitlement culture, a culture that would work around problems, would do fixes that would be not permanent fixes to issues that were brought up but they would be workarounds, they would be logged, they would be the so-called backlogs that would accumulate at a plant, and that there was a general sense of complacency in how we managed those plants.

That was a qualitative kind of feel that was coming out more and more as the discovery phase and understanding of what it is that's really frustrating us about the overall performance of the plants was getting to. The IIPA quite clearly and quite dramatically documented these in a quantitative way, documented the human performance failings, the complacency environment, the overall lack of a safety culture and focus in all of our operations, from management right through the plant.

You kind of then try to put some sense around what that means for you and what are the kind of generic causes that bring that forth. One of the root causes, one of the starting points in all of this — and it's not unique to Ontario Hydro; it's been replicated in organizations like the Tennessee Valley Authority — is that the overall initial success of the organization is one of the root causes that ultimately leads to its kind of fall from grace. You start believing your own headlines. You start becoming insular

in thinking that you in your own management can solve the problems that arise — that you don't have to look outside to other people in the world because of course they operate different kinds of plants, so how could they know what the Candu system needs? So the insularity issue, the complacency that sets in over time, the lack of accountability and a general loss of focus in operations are all issues that come to bear on this human performance dimension and safety culture dimension.

I think in the IIPA report, if I'm not mistaken, at the beginning there's a statement made that Ontario Hydro never successfully made the transition from a design and construction organization to a nuclear operations organization. I think that's a root of one of the issues we're dealing with.

**Mr Galt:** Okay. There are some suggestions in that report that there were so many concessions given to the union that the managers were unable to manage. Would you like to comment on that?

**Dr Kupcis:** I'll comment on that to this regard. There's no doubt in my mind, having tried to manage through the collective agreement that we have with our unions, that it is a very difficult job that we ask our managers to do. But that is not the fault of the unions. Clearly a union agreement is a two-way issue, it's signed by management and it's signed by the unions. It is another one of these examples of a monopoly structure, of 90 years of monopoly culture that doesn't recognize it's in a competitive world that has customers, that builds in over time and through contracts things that you won't find in the private sector in companies where they have to compete, because of course all of these things can go to the bottom line in a cost passed down to customers. That's by definition in the Power Corporation Act.

So it's not a blame attached to a union or a union contract; it's a joint issue that the company, over time, has also built into its structures which really did and do continue to frustrate the achievability of some of the goals and targets that the corporation is now faced with in the turnaround, and that is the lack of flexibility, basically, in terms of the rules and regulations of action.

1910

**The Chair:** The opposition caucus.

**Mr Conway:** Thank you, Mr Chairman. Dr Kupcis, could you tell the committee just a little bit of your background and how long you have been at Ontario Hydro and in what capacities.

**Dr Kupcis:** Certainly. I got all of my three degrees from the University of Toronto, went on and did a little bit of work at the university of Oxford and then after my post-doc, I guess within a year, I joined Ontario Hydro in 1973 as a research engineer in the research division out on Kipling Avenue. In 1973, it was the middle of 1973, Ontario Hydro was launching and on the bloom of the biggest nuclear construction program on this continent. It recognized that some of the knowledge that it had to gain from all the disciplines in the sciences with respect to operating those plants would also have to be augmented. There was a growth in the research areas of Ontario



Hydro, primarily aimed at increasing the kind of problem-solving capability that that kind of organization could offer operations.

Through 1973 until 1988 I was in the research division. My work was almost all directed at nuclear in-service inspection, nuclear safety, failure analysis of nuclear components. In 1988, I moved to head office in the capacity as director of corporate programming, which is a fancy title for the director kind of responsible for managing the business planning process in the corporation on behalf of the senior executive. In 1991, I was appointed vice-president of power system planning and procurement, which included NUGs contracts and real estate and supply and services issues.

At the end of 1992, when my immediate predecessor, Alan Holt, left the corporation and Maurice Strong was appointed chairman, I was appointed acting president.

**Mr Conway:** Thank you for that background. One of the issues the committee is struggling with is this culture of management, particularly at Ontario Hydro Nuclear, that seemed to have such problems as have been indicated by, among others, the Atomic Energy Control Board, who were in here this afternoon saying that senior management at Ontario Hydro Nuclear had good intentions, stated repeatedly, but they just couldn't seem to turn good intentions into practical results.

Mr Farlinger, on August 13, stunned a lot of us by observing, and I'll just quote some of what Mr Farlinger said, that: "The nuclear unit was operating over all those early years as some kind of special nuclear cult. Senior management didn't dig into what was going on in that special unit to the extent we might now say they should have. Nuclear was something different; it shouldn't be probed as deeply as other business units."

Boy, if I'm a layperson, I read that and I say, "Wow." So if there's a cult, I guess I've got to believe you're part of it. What do you have to say about it? Do you think it's fair to say that a big part of the problem was that there was some kind of cult that just stood in the way of getting the kind of progress that Ontarians would have wanted, particularly on nuclear safety?

**Dr Kupcis:** I guess I would answer that in this way. I myself have been publicly quoted as calling our nuclear operations and the management of nuclear a priesthood. This was very publicly at the Atomic Energy Control Board in 1996. I guess you might relate the priesthood to a cult, but I think what that is trying to get at —

**The Chair:** I'd like rise on a point of personal privilege, but I don't know who I'd rise to on that.

**Mr Conway:** You might want to talk to Michael Enright before you go any further.

**Dr Kupcis:** Yes. What that very dramatic statement is trying to capture I think is, in retrospect and with hindsight, this issue of insularity that developed in the nuclear operations of Ontario Hydro over a long period of time, stemming from initially a belief in their own headlines. It was I believe in 1981 that Ontario Hydro had eight operating reactors. Seven of those were in the world's top 10. That kind of headline, that kind of performance over a

period of the first 12 to 13 years of the company, of nuclear operations, just led to an insularity built into that organization from an operations point of view that in the end forced them to get into situations where they didn't seek outside help because they didn't believe anyone else could.

**Mr Conway:** But Dr Kupcis, if there was a priesthood, you were clearly a high priest —

**Dr Kupcis:** Of course.

**Mr Conway:** — and we have here today now from the AECB very clear documentary evidence that makes plain that people like the federal regulator were telling people like yourself, Mr Farlinger, Mr Franklin, Mr Eliesen, Mr Horton, Mr Anderson repeatedly, in depth, over a long period of time. Taxpaying citizens of Ontario, ratepayers, would have expected that the high priests, who are paid handsomely for their priesthood, unlike the Chairman of this committee in his previous life, would have accepted their leadership responsibilities and, to the extent that a federal regulator, the cop, was saying there is a serious ongoing deterioration, in particular on nuclear safety operations, would have done something.

**Dr Kupcis:** Yes, and we did. I think you heard, if I'm not mistaken — and I think you opened with that. Dr Bishop I think told this committee that Ontario Hydro responded to every one of those warnings, every one of those letters with a plan, an analysis, a plan of action and performance indicators that would measure whether you've got there. In every one of those cases we showed over and over and over again that within the organization we had a total incapability to address those problems, because we failed repeatedly in making the progress that was expected in the time frame that was expected. So it's not as much the issue of a concern about the safety performance and nuclear performance of the plants. The concern is about the inability of the organization to respond to those concerns in a timely fashion.

**Mr Conway:** But two or three hours ago the federal regulator said rather clearly that in the fall of 1996, they, the AECB, came close to ordering the closure of the Pickering nuclear generation station.

**Dr Kupcis:** Yes. In 1996, the issue of nuclear performance and what we're going to do about it and how we're going to tackle it differently was high and constant on the agenda of the board and senior management.

**Mr Conway:** How would it be possible for a situation like the following to develop, for that situation in the fall of 1996 to get to a point where the AECB, very seriously concerned about Pickering, finally decides, I think in December, that they're only going to allow a six-month extension, which is a very real slap on the wrist?

**Dr Kupcis:** Yes, it's putting you on a watch list, no question.

**Mr Conway:** While you're still president, four months later, the chief nuclear operator, Carl Andognini, prepares a letter, and he sends it to Mr Harvie, who was here this afternoon, the director general of reactor regulation, dated April 16, 1997, saying that Ontario Hydro corporate now

feels quite comfortable that all is well and that they should be relicensed at Pickering for five years.

**Dr Kupcis:** That's not what the letter says, Mr Conway. The issue of relicensing a plant is a particularity, a peculiarity of the Canadian regulatory scene. In the United States they give an operating license for ever, okay? But a regulator can at any time, no matter what an operating license is, step in and put a plant on a watch list and get its concerns addressed.

1920

**Mr Conway:** Dr Kupcis, I've got the letter in front of me. Four months after Pickering gets a six-month extension, somebody named Carl Andognini writes to Mr J. Harvie. He concludes his two-page letter by quoting from that letter on April 16, 1997, "Therefore, in keeping with corporate management's mandate, involvement, action and the continuing progress being observed at the Pickering nuclear power station, Ontario Hydro respectfully requests a five-year operating license for Pickering."

Laypeople would look at this and say — you just talked about the priesthood and about things not sinking in. Well, Kupcis and Farlinger and Andognini are running this operation. They have been told in recent weeks that they are on the verge of perhaps not being relicensed at Pickering. Andognini has presented your board with a report that says there are all kinds of ongoing problems at Pickering and none the less your chief nuclear operator is writing a letter to the federal regulator respectfully requesting a five-year license for Pickering GS. To a lot of regular folks, that would speak to a very serious problem.

**Dr Kupcis:** Well, I just don't interpret it that way. The distinction between regulatory compliance and safety culture issues in the plant is very real. The Atomic Energy Control Board is the agency that deals with compliance issues. No plant can operate without meeting the basic compliance issues of a regulator. That regulator is charged with looking after public health and safety with respect to those operations. The IIPA had by that time looked at this issue of safety margins, whether there's anything in the hardware or the technology of the plants that has degraded the safety margins to the point that we would not be meeting compliance issues of the regulator.

The issue if, is the culture of the people, the mindset of the people and how they operate the plants, acceptable, is it going to lead to problems for the long term, that's a separate issue that the corporation has to address, very clearly a large issue that has resulted in a very large economic and environmental issue for this province.

**Mr Laughren:** Mr Kupcis, welcome to the committee. I think that generally speaking you have a reputation as being one of the not too many straight arrows at Ontario Hydro, and I hope you enhance your reputation in that regard here this evening.

I think that at Hydro there was a board committee on the nuclear division. Am I right?

**Dr Kupcis:** Yes, we established it at the end of 1993 and it was called the nuclear safety review committee at the board.

**Mr Laughren:** Who chaired that?

**Dr Kupcis:** It was originally co-chaired by Dr Reynolds and Adele Hurley.

**Mr Laughren:** Is that Keith Reynolds?

**Dr Kupcis:** No, John Reynolds, University of Toronto.

**Mr Laughren:** They were board members who chaired this committee?

**Dr Kupcis:** Yes.

**Mr Laughren:** Was that created as a committee of the board because of the ongoing problems in the nuclear division?

**Dr Kupcis:** The committee was created as a direct output of a review that I had asked to be done in 1993. I'd asked the Institute of Nuclear Power Operators in the United States to help us in doing a review of the corporate support to the nuclear division, that is, how the corporation is either supporting or creating barriers or hindrance with respect to the safety mandate of the nuclear operations division. That kind of analysis is called a corporate peer review in the jargon of INPO. It was at the end of 1993, I believe. It said something to the effect that the corporation had not established clear enough expectations of the performance of the nuclear operations and that in fact a board committee to exercise due diligence on nuclear operations should be established, as in almost all of the jurisdictions of the United States. It was established and I think it met at the beginning of 1994.

**Mr Laughren:** Wouldn't you agree that AECB had laid out pretty clear directives for the nuclear division?

**Dr Kupcis:** No question, and that relates to this compliance issue again. In every instance, in all of those letters where Ontario Hydro was asked to respond to a regulatory compliance issue or else, there was a response — not always timely enough.

**Mr Laughren:** And pretty bland too.

**Dr Kupcis:** And in some cases bland, as acknowledged subsequently in looking at the material.

**Mr Laughren:** The reason I ask that is it seemed to me that that committee of the board should have got Hydro out of trouble. Were they not able to get the information they needed from within the system? Was that the problem?

**Dr Kupcis:** I think there's some of that. But let me put a perspective on the time line here. We're starting with a committee starting up in 1994. It's a committee of the board, it's a governance kind of committee. It got immediately active in trying to understand some of the AECB reports, and in fact invited the AECB, for the first time ever I think, to talk to the board. They had discussions with board members and were advised that those board members should all take, I think it was, a one-day or two-day workshop on what safety culture means, what their responsibilities are in a nuclear setting. Through the period of 1994 that was what was going on: a learning curve, a discovery phase for the board members of what our nuclear operations were.

Through 1995, the board started to concentrate for the first time ever on peer reviews that were being done within the nuclear organization. They were being presented to the board, starting to be discussed, the



response plans that would be put in place for all of those. They became extremely active and I think acted as a catalyst. The board and the board committee, and ultimately the whole board in 1996 when the increased frustration and urgency around the issues that didn't seem to be getting addressed got raised through the whole board, were a catalyst in this process in getting us to the point of bringing in the expertise where it was.

**Mr Laughren:** In the form of Mr Andognini.

**Dr Kupcis:** That's correct.

**Mr Laughren:** What puzzled me — and you're an engineer, I believe. Is that the right designation you have?

**Dr Kupcis:** Yes.

**Mr Laughren:** You're an engineer of some considerable background and education. When Dr Bishop of the AECB was here this afternoon, I asked her about looking back, because this committee in its initial phase is looking at how we got here, what the problems were that go us here — not the recovery plan at this point, but how we got to the position we're at now. She said, and I don't want to be overly simplistic about it, that if she could put her finger on one major issue, it was the failure to engage in preventive maintenance at the nuclear generating stations. I'm not an engineer. It seems to me that would be just sort of a given from day one, that given the nature of the nuclear beast, nothing would be more important than preventive maintenance. As an engineer, how do you explain that that didn't happen?

**Dr Kupcis:** I think her comment is quite valid. How do I explain that? By shaking my head and wondering myself. It gets back to this issue of the organization being totally consumed, overwhelmed by design and construction project management. It had totally lost its focus on operations. It's a different organizational structure and a different support that are required to engage in nuclear operations. That means that all the way through, maintenance and engineering support have to be aligned and tuned to the operations aspects of that plant, not to their own kind of particular interest areas.

The issue of not being able to move successfully enough and fast enough from a design and construction orientation in the mindset speaks to the design engineering aspects and the modifications, those being the things that were getting attention, as opposed to what operations needed in the support from engineering. Preventive maintenance: Absolutely. I mean, it's hard to understand. In every operation, from fossil to transmission systems to everything else, the issue of looking after your assets, trying to establish remaining life and looking at the capital reinvestment that you need in terms of maintaining those assets is a slam dunk. It's a given that that's where the concentration is. In retrospect, the evidence is clearly showing that the organization had not been structured and focused from a management point of view to give a focus on that area.

1930

**Mr Laughren:** Was the nuclear division — and these are obviously a layperson's words — too highfalutin to use a common General Motors phrase like "preventive

maintenance"? Is that part of the problem with the nuclear cult that existed, if it did?

**Dr Kupcis:** It's another way of trying to grasp, in layman's terms, the issue of complacency and how it develops around work practices and the insularity issue. But you're right, I think it is this lack of stopping to search for solutions, almost forgetting that the world moves ahead, the standards keep getting raised. Even if you're operating at your own past standards, the world has moved past you, and what used to be excellent no longer is, because expectations have increased. It's that kind of a mindset that we clearly had established in that operation.

**Mr Laughren:** Many of us feel very sad about what's happened at Hydro, because for those of us who believed in public power and so forth, it's a sad story that's unravelling here. I really wonder, at what stage in the whole process did it sink in to senior management, including you, that you had a real problem here and that it really went back to something as simple as preventive maintenance and you had to do something about it?

**Dr Kupcis:** For me, it's a question I've been trying to attend to for the last year and a half, trying to look back and understand myself what was it that I could have seen earlier, or what were the signs that I missed, and why wouldn't I have been able to take earlier action and maybe mitigate the impact of the overall issue as it stands before us today. Clearly where the light went on for me, if you want to put it that way, was when we got into the second round of peer reviews at all of our stations. As I'd indicated earlier, we'd gone through self-assessment peer reviews at most of our plants through the 1994 period.

**Mr Laughren:** Sorry, this was after the —

**Dr Kupcis:** It was the second round, when the plants were looked at again. In all cases we got numbers like 86% repeat findings, 55% repeat findings, 62% repeat findings in peer reviews. What that was getting to was the response plan that we had full confidence — maybe misplaced confidence — in the nuclear management in developing and saying, "This is how we're going to fix all these findings." Carrying it through, you find out 18 months to two years later that they'd been miserably unsuccessful in carrying them through. That's where it became clear to me that we don't have the training, we don't have the outward look within our own nuclear business area of finding our own solutions. It speaks to an inability to deal with root cause issues. That is sad; it's been a tough time.

**Mrs Johns:** When I was getting ready to prepare for you coming, I talked to a couple of people about you. Someone called you a critic of the nuclear division within Ontario Hydro. They told me a story about a report you authored on pressure tubes. As the story went, you wrote this article on pressure tubes and your report was basically not listened to. Can you just explain that to the committee?

**Dr Kupcis:** I think it's a little more complex than that. It is going back a bit into maybe revisionist history. That was in the early or mid-1970s where Ontario Hydro, early on with Pickering, ran into these hydride problems around the pressure tube rolled joints. It's kind of a phenomenon

of the zirconium technology and the way we were operating the plant. It certainly wasn't just me, it was a number of scientists at the research division who were really concerned about our understanding of that issue and the continued operation of some of our units while we didn't have a full understanding.

Through the internal processes, we approached the appropriate committee in the design and construction organization, the internal nuclear review integrity committee, to present our case, present our findings and have a hearing. We got a full, open hearing. Their deliberations indicated that they weren't as concerned but thanked us for our input.

**Mrs Johns:** They told you that they weren't concerned about what you had made your recommendations on. Then what happened? Within a short period of time, were your findings found to be correct?

**Dr Kupcis:** Subsequently it was proved — through all the retubings — that it's an issue that did produce a cost and needed to be addressed in the company.

**Mrs Johns:** I found that story interesting. What I wanted to know from that is: In your evaluation of what happened in that specific instance — that's the first time in the 1970s, I hear, that someone had drawn attention to a nuclear problem and went through the process and nobody at Ontario Hydro listened, even though you were from Ontario Hydro. Was there some kind of a tradeoff being made? Why wasn't the nuclear division listening to the research division with respect to potential issues or problems that they had there?

**Dr Kupcis:** I don't think you can characterize it as not listening, because they did. There was a very extensive technical investigation and review of our finding. The debate — if there was one — was on the implications and the severity of the implications of those. That's where, rightly, here's some room for debate on trying to understand what action should be taken. Having raised the issue, it wasn't dismissed and ignored. There was further work asked for and further investigations done to see if any of that could be substantiated. I felt that we had an internal process and that it worked. It wasn't a dismissal of some concern. But in some areas, where there was valid room for how you interpret what the implications might be, there were different opinions.

**Mrs Johns:** We heard today from the Atomic Energy Control Board, and yesterday too, I suppose, that Ontario Hydro entered into a very quick expansion of nuclear power in a very short time and were the biggest builders of nuclear power in the late 1980s. That would be the time frame. At that same period — let's say between the mid-1980s and the late 1980s — there started to be a downturn in performance in Bruce, for example. Can you comment on whether there is some correlation between the start of building and this great surge of nuclear activity at Hydro and the slide in maintenance?

**Dr Kupcis:** I think there is. I would personally suggest that there is. Maybe it's tenuous, but I really believe that. Of course, the building phase and the size of the design and construction organization was, through the 1970s and

the 1980s, up till we were completing Darlington — some of the performance changes for the overall nuclear program in the mid-1980s were due to taking units at Pickering A out of service to retube them. They were affecting the overall corporate performance because they were out of service.

But there's no doubt in my mind — and I wasn't there at the time — that a senior management and a board that is consumed with — and this was in 1988, 1989, 1991, 1992 — the building and the finishing of Darlington, the monthly increased overrunning of costs of that plant, the technical problems that plant faced in getting on line — that is, getting into service, because at the start of trying to start it up, they ran into some serious technical difficulties — and the overall management-board attention to the billions of dollars that were consumed in the Darlington exercise, while the board also consumed itself at that time with the immensity of this 25-year plan, if you'll recall, that came out of Ontario Hydro in 1989, I mean, that's what consumed time — management capital, if you like — and board time.

I've got to believe that all of that attention left nuclear operations, left the retail system, left the transmission system, left the guts of the utility operations — what Ontario Hydro's there for — to fend for themselves. That's part of the evolution of the difficulties of the corporation. It was consumed by Darlington and it was consumed by the demand-supply plan and the building of 10 more nuclear stations. In the late 1980s and the beginning of the 1990s, clearly there was decline in overall performance also within our nuclear division.

**Mrs Johns:** Can you explain to me — you're obviously very qualified; you have a résumé that some of us would love to have — why you chose to hire Carl Andognini and not to move on your own report about nuclear?

**1940**

**Dr Kupcis:** That was really an outcome of that heightened anxiety I was developing through 1996 as all these second peer reviews were coming in, being reported to me, and about the organization's own inability to deal with the issues. I initially took some maybe moderate baby steps. I contracted with a person by the name of Gregory Kane from the United States, an ex-nuclear navy guy who was now in the consulting business, to look at turnaround plans. I attached him to Pickering first of all to do a walk-around, to every two weeks go and spend a week there and walk around with the management and give me some independent, third-hand sense of, are we making progress? We had improvement plans coming out of our ears of what we needed to do. Were any of those making any progress?

We changed some of the senior management. I looked for what I thought were some of the better directors of plants and moved one into Pickering because I thought it needed that attention. Those were things that were starting to be done through the middle of 1996, but from all the evidence I was getting back from the third party looking at what was going on — are our plans working? — I would characterize it as that I got the sense that within the



nuclear plants themselves, we have not established a sense of urgency on the issue, on the turnaround required in the culture of the place. We haven't done it with our own people. If we can't do it, if we don't have the talent after I've shuffled it around and looked for what I thought was the best internally, I started the process in the fall of talking to some of my peers in the United States, looking for: What is available? Who has a demonstrated track record? Who has Nuclear Regulatory Commission experience, in bringing in the processes and procedures that the NRC in the United States uses to assess plants on their watch list?

I also had a very long conversation with an ex-Nuclear Regulatory Commission individual who had spent some time at the Bruce, who told me in I guess late October: "You've got all kinds of programs. Some of it's going there, but you're not going to arrive there in time. You've got to quantify the issues facing Ontario Hydro, find out how deep the well is before you're going to dig yourself out of it. You've got to do it in a quantified way that shows the people within the operations that this is real, that this isn't just something we're concerned about that is qualitative, kind of culture and mindset stuff, but that there are real issues that had better be addressed because these plants aren't going to operate for long unless they turn that around."

That led me to, among other people, spend a whole day with Carl in December 1996. What I was looking for was not an individual who was a consultant; I was looking for an individual who could recommend to me a team of five to six people that covered the areas of maintenance and operations and engineering at a plant, that had experience in turnaround situations, that would come in as a team to, first off, do the investigation, that NRC-based investigation, but second, to stay around and do the fix. The last thing I wanted was a consultant that says, "Here's your problem," and then goes away. We needed a group that was also capable of committing to do the fix.

I knew very well, and I told the board in January 1997, "What this group coming in is going to do as an investigation here could easily result in an early shutdown of some of our units." I was concerned about the compliance safety margins. In effect, it turned out, just from a resourcing point of view, with the complexity of issues we're facing, the recommendation of shutting some units and putting them in dry dock while we prove a track record that we can fix what we've got is what I guess is currently in front of Ontario Hydro.

**Mr Kwinter:** Dr Kupcis, you've spent close to 25 years at Ontario Hydro and you rose through the ranks.

**Dr Kupcis:** Yes, I did.

**Mr Kwinter:** In 1992, when you were appointed acting president, was that an open competition? Did you just get promoted from within?

**Dr Kupcis:** I was promoted from within. I happened to be in the wrong place at the wrong time. I mean that. I had the signing authority for the president's office because the president was in Spain when he was fired, so I was made acting president.

**Mr Kwinter:** What I'm trying to get at is that under your terms of engagement as the acting president, was it Maurice Strong, was it the board, was it a committee of the board?

**Dr Kupcis:** The acting presidency was clearly identified as interim. Maurice Strong, as the new chairman coming in, was trying to do his own assessment of the corporation in crisis, as he called it, I think in December, in front of a hearing of the Legislature.

He talked to me and said: "Look, I don't know you and you don't know me. We don't know what we have to establish here, what we're going to have to do at Hydro. I'd like you stay on because you're kind of sitting here in the office and you've got the signing authority, and let's see how it goes." But he did want to talk to me about the kind of things we should be looking at and doing. That was clearly an interim, week-by-week, ongoing situation.

**Mr Kwinter:** And when was it ratified?

**Dr Kupcis:** It was ratified by the board, as a recommendation from the chairman, I think in April 1994, after the task force in change had been completed, after the recommendations for the cost constraint of the corporation were done and put in place, and after some of the organizational changes, restructuring, the corporation needed.

**Mr Kwinter:** The reason I wanted to know that is, at any time were you made aware of the problems with Ontario Nuclear? Were you given direction and told, "Go out and fix it"?

**Dr Kupcis:** My own awareness of continuing issues and frustration around the operation of the nuclear business really came through my previous job, as I said, as director of corporate programming, where I was doing the business planning integration for the corporation. In that job itself, the five-year and 10-year planning of the nuclear business or the hydro-electric or all the capital requirements of those businesses would come under scrutiny.

There was clearly a sense — as I said, I started in 1988 and I was there through the period of 1989, 1990, 1991 — that we were being drawn away in nuclear operations, as a corporation, with ever-increasing requests for resources and money and decreasing performance of the operation. At that level, we knew there was an issue around how the nuclear was being organized and structured, and of course it was the task force in change that particularly looked at, "What do we have to do differently here to put a focus on nuclear that gives it a chance to look at it differently as a business?" That's where the business unit structure organization of Ontario Hydro — it was around through that organization and change.

Our feeling was that if you put a business around nuclear, take out all the supports and do away with design and construction — that was the big downsizing, the design and construction disappearing — draw the engineering resources into nuclear that it needs to support operations, draw the head office staff and finance and human resources into nuclear that it needs to support its operations, in fact if you set up a balance sheet where the

cost and revenue from that business is clearly shown, you will move a long way to structurally and in a management behaviour sense move that business into a mindset that at least knows what all its total resources are, what all its costs are, and can deal with managing it forward.

In fact, 1994, on the dimension of performance of nuclear, was the best year Hydro had ever seen. This is after we did that structure, after we set up nuclear as a business. In 1994, if I'm not mistaken — this can be checked — nuclear operations had a 76% overall capability and all 20 units that it had built operated for the first time ever. It went well over 90 terawatt hours of energy, well over 65% of the total requirements of the province. We had this situation that we'd gone through a restructuring, done a major reshift in how we managed the nuclear business, and 1994 turns out, on that dimension, on that measure, to be excellent.

But underneath that measure, underneath that, we started doing peer reviews and we started getting concerns about workarounds, people not paying attention to how they really need to do the business. We looked, and on the dimension of industrial safety, health and safety statistics of individual employees, nuclear was doing very, very poorly. It turns out — again, this is a learning curve for me — in retrospect that one of the precursor identifiers for problems down the road in a nuclear culture is the industrial health and safety measures of the organization. They're the first indication that you're going to have problems if you don't pay attention.

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**Mr Kwinter:** I hear what you're saying. You take over permanently in 1994 and you realize there is a problem. You bring in the Andognini team. They report to you in interim reports. You get this final report that you present to the board in August, and it says all the things that everybody says everybody knew about. For years —

**Dr Kupcis:** But this time quantified.

**Mr Kwinter:** It quantified it, but it wasn't a great surprise. All you have to do is take a look at the — Mr Lévesque at the Atomic Energy Control Board had problems. We had the doctor in today.

My question is that after all this is done — you lead the initiative, you get this thing going, it looks like at least you've quantified the problem, you've got a team that's going to come in and implement their recommendations, and then you resign.

**Dr Kupcis:** Yes, absolutely.

**Mr Kwinter:** Why does that happen?

**Dr Kupcis:** It happens for two reasons. First of all, there is an ultimate accountability through the chief executive officer for the asset impairment of the corporation. I may not be hands-on directly responsible for 10 years of deterioration in the safety culture, but I'm ultimately accountable. One of the lines in Andognini's report, the IIPA report, was that the major issue facing Ontario Hydro is the lack of an authoritative and accountable management leadership. There is no way I can, as a chief executive officer, preach to the organization, "Account-

ability is the thing we've got to establish," and sit there and say, "but I don't have to exercise it." That's one thing.

A second thing is that the continuing anxiety by the board and the committees of the board around nuclear, through this discovery phase, through the understanding of the complexity of the issues and the final understanding of the cost implications of doing a fix, clearly led to an anxiety on the part of the some of the board, as communicated to me through the chairman, that perhaps it's time the board had a clean slate, something to work with that was a green field in moving forward. It didn't take me more than 10 seconds to agree that I have the accountability and that that opportunity should be given to the corporation to see if it can find a fix.

**Mr Conway:** Can I just have you repeat the second part again very clearly? The first part I understood. I think you said that you felt there was sufficient criticism in the Andognini report about accountability etc and you were prepared to take the walk.

**Dr Kupcis:** Absolutely.

**Mr Conway:** What was the second —

**Dr Kupcis:** The second part —

**Mr Conway:** Be very clear here.

**The Chair:** Very quickly, Mr Conway.

**Dr Kupcis:** The second part relates to the need that, with this large an impact on the organization, the board really should have the opportunity to find a new individual to implement the turnaround plan. It needs a green field.

**Ms Marilyn Churley (Riverdale):** Mr Kupcis, I was at the press conference in August, and I don't believe you were there.

**Dr Kupcis:** No.

**Ms Churley:** I can tell you that it was a very strange press conference to many of us. I must tell you that there was a feeling by some, including myself, that you were a bit of a fall guy. You were seen to be taking some proactive leadership in this area, but you were the one who ended up resigning. I'm wondering if you have any comment on that. Why you? Out of all of the other people who should be accountable, why were you the person to resign?

**Dr Kupcis:** There is only one individual, and that's the chief executive officer, where the board's accountability can be exercised. That's in that chair.

I think you've heard statements that what the IIPA contained in terms of its findings were not really that big a surprise, because we had been hearing it in various pieces through the piece. What really came to the fore was the response plan that was put in place and the cost of that. The impact on this province of taking some units out of service while you're trying to fix the others, not just in the cost of doing that but the replacement energy costs and the environmental costs, are just too big to put down and say, "That's an executive vice-president level," or "That's the head of Nuclear that should be leaving."

In the whole process through the years, through 1995, we lost directors of nuclear plants. We lost the general manager of the nuclear business. We lost the executive



vice-president of generation. Ultimately, and not surprising to me, it had to be the chief executive officer.

I had been there for four and a half years: two years as chief operating officer, but two and a half years as chief executive officer. Yes, I was trying to find out the depth of the issue, trying to understand how bad it was going to be, and I think I did. But ultimately, am I the right individual to carry it forward? I feel very depressed about not being that and I certainly don't like to be seen as walking away from it, but that's a reality.

**Ms Churley:** I appreciate your answer. I'm sorry to interrupt, but I have to run in a minute to take my duties in the Chair, and my colleague Ms Lankin has some questions as well. I would love to ask you what you think of the recovery plan, but that's for later.

I want to get back to the issue of what you think went wrong. I was very interested, and also accept, your comments about some of the preoccupations and some of the particulars around the cult, but I think you'd agree with me that it also goes much deeper than that.

We have examples of very severe internal communication problems. For instance, just over the past few months, we had the issue of the copper and zinc. There were internal memos flying around all over the place about that from staff to different managers, and for 20 years nothing happened. There was the water containing radioactive tritium issue as well.

I would like to ask you to elaborate a little on that problem, from what you know about it in the short time you were there. For heaven's sake, I can't understand why people couldn't communicate. On the zinc and copper leakages — I've said it in the House and I'll say it again — it appeared even to be covered up, from the internal memos I saw. That kind of stuff is very worrisome. One wonders now, with some honest and open discussion, how much more do we and the public not know about what's really going on there?

**Dr Kupcis:** I don't disagree with that concern at all. One of the things I've said in several forums publicly is that Ontario Hydro in all its operations, but particularly in its nuclear operations, has to have the full confidence, first off, of the community in which it operates and the general population of this province. It can't operate a nuclear technology or plant without that.

The nuclear industry per se, around the world, has gotten itself into — certainly through the 1960s, 1970s and 1980s — a perception of an industry that always is going to talk to itself because it has its own jargon, that: "Those people out there don't understand. They never will. Radiation is a very complex issue. This is a really tough technology, and we just can't communicate with the so-called general population."

I think the industry fell into the trap of discounting the ability of individuals and citizens in any community to think for themselves. I think that's a trap that Ontario Hydro also fell into, along with the industry.

First off, in the early years, the lack of honest communication with the public built to the insularity, built to this feeling that "We don't even have to tell senior man-

agement about this problem because we'll have it solved before they know about it." It kind of builds to that environment and that expectation of how you work in the nuclear industry.

It's a statement that is really of concern. It should be of concern to everybody where there are nuclear plants around. How much more is there, and how much further do you have to go to expose the issues around nuclear for full transparency so you can start to regain some of that confidence? Some jurisdictions have done it; some companies have done it exceedingly well in regaining that confidence of the public.

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**Ms Frances Lankin (Beaches-Woodbine):** Mr Chair, I have three questions I wanted to put. How much time do I have?

**The Chair:** You have about a minute for each.

**Ms Lankin:** Okay. The first one is very quick. I understand your honourable response with respect to your feeling of accountability. I want to follow up on Mr Conway's question with respect to the second reason and the board needing a clear slate. Did I understand that suggestion or comment or opinion was put to you directly by Mr Farlinger?

**Dr Kupcis:** Oh yes, but it wasn't the first time. For months I've had continuing discussions with the chairman about — let's put a perspective on this. All of this is happening in an environment where Ontario Hydro is expecting a government policy announcement of one of the biggest changes in its history — a competitive environment for itself. Ontario Hydro has a board-approved strategy to prepare itself for that competitive environment. Part of it clearly is getting our nuclear plants so that they operate and can be competitive.

In that context, I've had ongoing discussions with some members of the board and the chairman about when it's going to be the right time for the board to start engaging in a CEO/new leadership process because clearly, at least in my mind, the expected change to a competitive environment for parts of the organization would dictate to me that the leadership of the organization will have a very different skill set that will be needed in moving forward, and that skill set, not surprisingly, is one that is much more attuned to marketing skills, customer skills and trying to win customers. That's part of a board and human resources committee discussion about succession of the CEO. It's a governance issue for the committee.

We've discussed about when would be the right timing, when it would be appropriate, but the need was always clearly an expectation on my part that that would be part of it. I think the nuclear issue and the size of it, the final quantification of it, kind of gelled also with those previous discussions and said that maybe now's the time.

**Mrs Fisher:** Good evening, Mr Kupcis. I have 10 minutes here to pack about 20 years of thinking into and I don't know how I'm going to do that. But anyway, my first question revolves around something that we were talking about this afternoon and yesterday as well. It relates to human resources and it relates to the ability for

Ontario Hydro to recover nuclear excellence and proceed with the full recovery of all units. There are three facets to the human resource planning that we have to look at: (1) Are there adequate numbers to make this recovery happen? (2) Is there adequate or inadequate training of those who are there and those who might come on? (3) The culture within.

I understand that in 1993 there was a very significant layoff. It was forecast to be in the range of 10,000. I know that 10,000 didn't really happen. I think it was somewhat less, or else it happened so fast and then contracts happened that it kind of got —

**Dr Kupcis:** In fact, it was 10,000 but included all of the kind of construction support, part-time, non-regular staff.

**Mrs Fisher:** So of the 10,000, how many were nuclear-trained workers?

**Dr Kupcis:** I've no idea. The majority of the regular staff — well, let's talk a little bit about the process. There wasn't just one downsizing package through the process. Preceding the task force on change recommendations in 1994, the design and construction division had already instituted a program of downsizing because Darlington was finishing. There was a package aimed at just design and construction because it was going to get smaller. The task force on change was looking at a potential decrease in the organization of some 4,000 regular employees, hopefully most of them from the head office functions, the kind of functional service support of the organization. The package was totally voluntary and open to any employee and had a time-limited period in which to be taken. I've forgotten the numbers of how it broke down in that process.

There were subsequent echoes, if you like, of that initial program in 1994 which were much more focused and targeted and not that open, but in terms of overall — and I'm sure you can get these numbers from Ontario Hydro — there were some 9,500 nuclear operations personnel before the downsizing and today there are some 9,500, if not more, nuclear operations people. The people are different. The design and construction engineers and functions are not in the organization.

In the past, nuclear operations had the luxury of calling on the design and construction expertise to problem-solve technical issues. That is no longer there, and the skill mix is different. So the numbers are the same; the qualifications, skill mix and support in the background are not the same. The downsizing has clearly had an effect. You can't say it hasn't.

**Mrs Fisher:** I know that at our site, and I don't want to be site-specific here but I'm sure it's relative and I think it probably happens throughout the rest. I stand to be corrected if I'm guessing wrong here, but I know that in 1993 alone we were looking at 708, and I'm pretty positive that all happened. The problem is that the ones who came to replace weren't as highly trained and in different fields.

We're looking at cause and effect here tonight. Mr Andognini's report refers to understaffing and a lack of human resources to do a full recovery.

**Dr Kupcis:** Yes.

**Mrs Fisher:** Never mind after you lay up the eight units, but even with what we have now, do we have (1) the adequately trained staff, (2) in the right positions with the right classification, (3) to meet the licensing requirements by AECB? Mr Andognini is on the scene. The question was asked yesterday and I don't think we got a very clear answer. Who was responsible for hiring Mr Andognini? Was it a board decision?

**Dr Kupcis:** No, I hired Mr Andognini and his team.

**Mrs Fisher:** Are the skills of a specialist from the States in a non-Candu nuclear reactor system transferable to the Candu system, as I would say to Britain, France or anywhere else?

**Dr Kupcis:** No question.

**Mrs Fisher:** So are the skills of the labour force from those sites also transferable?

**Dr Kupcis:** Yes. If they're authorized nuclear operators, they need to be qualified in our regulatory setting.

**Mrs Fisher:** I understand that. But if we're looking at a recovery mode, one of the major causes identified in Mr Andognini's report is lack of qualified staff.

**Dr Kupcis:** Yes, they need to be retrained.

**Mrs Fisher:** Trained, skilled staff to meet the needs as required. I understand that at the CNA conference a week ago it was brought to the attention of the conference that there are 200 qualified unemployed British nuclear workers. I understand also that there's a pool in other places. If we don't have them, not to mention the ones of our own who have been laid off probably not strategically smartly in the past who wouldn't mind being employed again, could we not instead look at addressing the human resource problem that seems to be the reason why the whole other part of the plan comes forward, of investing in our people for the long-term future and protecting the asset that we already have?

**Dr Kupcis:** There's no question that should be looked at, if in fact those opportunities are there, and I suspect they would be. Again, my sense of the industry in the United States: I mentioned another organization, the Tennessee Valley Authority, that also has fallen from grace and is trying to recover. Commonwealth Edison currently has got most of its plants — a huge nuclear utility on the watchlist with the NRC — in danger of being shut down. The Millstone reactors in the northeast United States have been shut down and are trying to recover.

There are a number of reactors in the United States that are trying to go through a recovery reinvestment in resources and training. The skill base, if it's there, is just going to be priced out of reality in terms of trying to attract it from all of these competing interests in the United States. It doesn't mean that there aren't people around, that there aren't places we should be going, and if



there are 200 out of the British experience, we should see if they can be relocated.

**Mrs Fisher:** Well —

**Dr Kupcis:** But one of the issues, Barb, if I could finish, is that it's the skill mix. A lot of people are available with the engineering skills. What we're lacking are the technical trade skills. We've got the numbers, but we've got a mismatch of skills.

**Mrs Fisher:** That's where I would like to start at home, quite frankly. That would have been my preference in the beginning. I appreciate your explanation as to why you went outside for a third-party, other view. I understand that, but I'd like to start at home. I think I could mirror this to each of the communities that have experienced this impact already.

I can talk about my own street that I live on where people are now dealing cards up at Casino Rama because they were afraid that they only had four years training invested in them at the time when, to me, the non-strategically planned buyout happened. They were afraid they'd get nothing, as opposed to just a layoff, so they took it. My feeling is that there are many out there who have that training in them. Quite frankly, if we have to admit that that mistake was made, let's reinvest in ourselves, because the money is already invested in them. Those are the same people Mr Andognini is talking about: "We need qualified staff. We need people to come here." I'd like to start at home, and then if we have to go abroad to shore it up, let's do that.

**2010**

I want to ask two more questions before I lose you here. One is with regard to the peer evaluations. Dr Bishop talked about them this afternoon and you've referred to them as well. Are the restrictions on peer evaluations or the standards of those more stringent than those of the AECB licensing requirements?

**Dr Kupcis:** No question. I don't know if it's restricted. They're looking very differently at finding evidence of how the plant is being managed in operations, in maintenance, in engineering, in radiation protection and chemistry, in security — all those areas that should be focused around the operation of the plant. They look in a very prescribed way at evidence that says that it's all integrated, focused on the right issue, managed appropriately; that the supervision of those functions is integrated with the policies, processes and procedures that the regulator expects to be carried through. It really is trying to get to the precursors on safety culture.

**Mrs Fisher:** On that word "culture" — I just want to interrupt because I want this last question asked — could you please talk a little bit about the difference of the nuclear technology itself and your support or non-support for that versus the cultural problems that we experienced?

**Dr Kupcis:** The CANDU technology in the plants is, in my mind, still a star among the early, first-generation nuclear plants around the world. It is a robust technology. It has a defence in depth that's designed into it that I feel very confident stands up to any design that's out there today. I think it has demonstrated through the things that

Ontario Hydro has had to do that it's capable of being revitalized, reinvested in. The pressure tubes right from the core of the reactor have been rebuilt, and they can still get the operating performance that's required out of them.

The hardware technology issue I'm absolutely not concerned about at all. The concern to me is the sustainability. Let me put it this way: I talk about safety culture, and people say, "Okay, that means safety of the plant." Safety culture is not a destination, it's a journey. It's an extremely fragile issue. A plant can be rated excellent, number one in the world, as they are in the United States, some of them. It can't then say: "We've achieved it. We've done it. We sit here." The unwavering attention that's required of management to address safety culture and constantly be on top of it, to say that it is part of the behaviour pattern and mindset of every employee here — the fact that they've gone through a radiation monitor 100,000 times and nothing has ever been found, but the next time they say, "I don't need to do it any more because I've done it so often," those kinds of things are at the root of the start of the decline in safety culture. It's just a technology that demands that kind of unwavering attention. It absolutely demands it.

It is different, I would suggest to you, than the operation of a fossil plant. That dimension of individual safety is the same kind of unwavering attention, but not on the procedures, processes and policies that operate and integrate that plant. It is a very demanding environment.

**Mr Conway:** Dr Kupcis, I want to come back to an exchange that you had with Ms Lankin. You've been very helpful all evening. Certainly I, and I think the committee as well, appreciate your candour. You've been more helpful than perhaps you might even understand.

*Laughter.*

**Mr Conway:** Actually, you should look up, because I'll tell you, there's one guy, wherever he is, Bill Farlinger, who's watching and listening. That's something I want to talk about.

There was a broader context here. About the time you became chief operating officer, in response to an invitation from Maurice Strong, Bill Farlinger produced a very compelling argument in June 1995 for privatization top to bottom, a new enterprise. In May 1996, Donald S. Macdonald, PC — Privy Counsellor.

**Interjection:** A Liberal.

**Mr Conway:** — produces this paper about electricity reform and major changes, effectively the dismemberment of Ontario Hydro. Hydro watchers, anybody who's been watching the debate through 1995, 1996, 1997, are more aware of the fight for the future of Ontario Hydro. It's a well-known story. I'm not going to embarrass you, but you know exactly of what I speak. That's going on. The government is talking about privatization, but not in a first-term mandate. Then we get the talk of a government white paper, but there's a lot going on, on a very fundamental question of policy. I'm told that Al Kupcis, like most smart people, is not without a view on this subject.

That takes me to your letter of resignation, which I want to make some reference to. It's dated August 12.

**Dr Kupcis:** Is that publicly available?

**Mr Conway:** I certainly was asking the committee —

**Dr Kupcis:** It should be.

**Mr Conway:** Yes, and I'm happy —

**The Chair:** Do you have any objections to having it read into the record?

**Dr Kupcis:** No, not at all.

**Mr Conway:** You see, the thing is that it's very noble of you to say what you've done about accepting your responsibility. I thought I heard you say the first time — that's why I asked you to repeat it, and I'll check the Hansard — something that conveyed a more active sense about Bill Farlinger's suggestion that it now might be the right time for new leadership at Ontario Hydro.

Be that as it may, you, Allan Kupcis, who in December, for all your faults and for all your being part of the priesthood, go and bring in somebody from the outside. A reasonable person would think you've got to know what you're going to get from Andognini or anybody like Andognini. You do that, you get a report and you leave. Like an honourable Roman, you fall on your sword. John Fox certainly doesn't feel so inclined. Bill Farlinger, who's been there for 18 months as chairman, doesn't have any compunction about staying on. You're the only one to take the walk.

Then I look at this letter of resignation. I want to read two paragraphs of this letter of resignation. After you talk about a few things, you say:

"As disturbing as I find the consequences," of the IIPA and the recovery plan, "I am very proud of the fact that I commissioned the Andognini report. I commend its results to you," meaning Bill Farlinger, because this is a "Dear Bill" letter. "I am also very proud of the role I have had in helping prepare Hydro for the competitive future ahead, part of which is recognizing and correcting the problems in our nuclear plants. Together, we have done tremendous work in strategically repositioning Ontario Hydro for a whole new market environment." That I understand.

It's this paragraph where I really need some translation:

"If I" — Al Kupcis — "could leave you" — Bill Farlinger — "with a word of advice, it is to continue the preparations for competition. There are those who say this approach only deflects us from an operating focus and is better left to policymakers outside Ontario Hydro. I could not disagree more. As the chairman of Ontario Hydro, your overriding obligation is to ensure that the company is strategically ready to compete. Of course, this means having our plants in world-class shape, but the cultural revolution required to turn a monopoly entitlement mindset among our people into one that is ready to embrace and succeed in the marketplace is the central task at hand. Without your encouragement and leadership on that, I suggest it is highly unlikely that Ontario Hydro will survive to take its rightful place as a leading North American energy company, a place that Ontario Hydro is uniquely positioned to assume if it prepares itself now."

Would you care to elaborate?

**Dr Kupcis:** Great letter. I had forgotten —

**The Chair:** Unfortunately, the response will have to take less time than the question.

**Dr Kupcis:** To elaborate particularly around that last part —

**Mr Conway:** Aren't you saying there that there's more going on here? Doesn't this letter tell us that Al Kupcis is preparing for a competitive marketplace, but he wants a substantial public enterprise that is Ontario Hydro to be in that, but that Bill Farlinger, like Don Macdonald, imagines a very different kind of future?

**Dr Kupcis:** That's debatable. You can interpret the recommendation of the Macdonald committee very differently, and how you slice the current organization into its different businesses and what kind of governance you put on them is a public policy issue, a government policy issue, but in talking to nuclear issues in that letter and in talking to the role of an Ontario Hydro that is in that competitive market and, more broadly, in North America, I'm talking about Ontario Hydro's generation being there, being able to compete and needing to be fixed, being in that position.

**Mr Conway:** Did you and Bill Farlinger have the same view as to the future for Ontario Hydro?

**Dr Kupcis:** I don't know.

**Mr Conway:** You really expect me to believe that?

**Dr Kupcis:** Yes.

**Mr Conway:** That you worked alongside, with this chairman for X number of months —

**Dr Kupcis:** The chairman was present at the board of directors in July 1996 when the board fully, unanimously endorsed the corporate strategy. That was a strategy to position Hydro for competition, to structurally enable the pieces of it to actually separate into holding company structure.

**2020**

**Mr Conway:** You see, the concern some of us have is that we recognize that clearly there are problems, and today's evidence both on your behalf and certainly the federal regulator's underscore that. In and of itself those problems existed, but there is another debate going on here.

**Dr Kupcis:** No question.

**Mr Conway:** A reasonable person could easily conclude that if it were your agenda to dismember and totally privatize Ontario Hydro, there are two things — Farlinger in his paper in 1995 makes this point — that you need to do. You certainly need to reduce public confidence in the way the state-owned enterprise is operating. That performance on August 13 certainly was not intended, as Ms Churley indicated, to raise public confidence. That clearly was a calculated effort to tell the people of Ontario that it was a mess over there, particularly at the nuclear power division.

Secondly, if you're going to privatize this provincial utility that has nuclear as two thirds in terms of its generation, as Farlinger points out, you've got to deal with the stranded assets issue. This recovery plan can be read in such a way as to say, "We've laid up one third of our



capacity and that's a very useful step in the direction of dealing with the stranded assets."

**Dr Kupcis:** It's an interesting conspiracy theory. Let me put it to you this way: I commissioned the IIPA in December, okay? That process occurred. We had been expecting a public policy statement on the restructuring of Ontario Hydro in the previous September, the previous November, December, January, February. It was imminent — the response to Macdonald.

**Mr Conway:** That's right.

**Dr Kupcis:** I fully expected, and that is another debate that was going on and occupying mine and the board's time at the same time, a declaration of policy intent that at some point down the road generation will be in a competitive market in this province, and that Ontario Hydro will have to position itself for that through the transition. I expected that announcement to have come out. The IIPA and the results of that, if it resulted in investments in plant and so on, would clearly be positioning those investments as a business decision, not made for a monopoly, capital in a monopoly sense that will be recovered from rates, but a business decision made on the competitiveness of that unit with X amount of capital dollars invested in it.

You can then treat every one of your assets, the 65 hydro-electric stations and 20 nuclear units and six fossil stations, on the basis of its ability to compete as a unit on a unit cost basis in a North American marketplace. Whether that plant can afford that investment and still compete could be an absolutely different kind of utility decision. That was my expectation, that that would have happened.

**Ms Lankin:** I'm going to come back now to the second and third questions I had before. Mr Kupcis, the first question I want to put to you deals primarily with the period before you took on your leadership role as acting president, and then president. I heard you say earlier on that one of the problems in terms of how the culture developed came and arose from the success of the organization, the rating of the plants as the best in the world.

**Dr Kupcis:** That's the sense I have.

**Ms Lankin:** Then you come in. You're aware of problems. You start a process. The board sets up a committee. There are peer reviews. The second peer review comes. The light goes on for you. There are continued problems at a rate of 86% and 50% in these peer reports. In between that time of those moments, there is at least a decade of atomic energy board reports in which I would have thought that for the leadership of Hydro the light would have come on, where there are problems repeated and repeated.

We heard that described this afternoon as a problem of sustaining the safety measures in place. Because you've offered an observation about the success of the organization leading to the deterioration in the culture, could you offer an observation about that period of time, of why it took two peer reports for the light to come on, as opposed to all of those AECB reports?

**Dr Kupcis:** It's a great question and it's one I have wondered about. All the letters that I guess are on file, and

all the discussions about a growing concern of the AECB around the operations of the entity, are on one dimension also asking for action around the compliance issues. I can only assume, because every plant was getting relicensed on a regular basis and some with no issues around them, that every one of the kind of compliance issues — which revolve normally around technical issues.

A compliance issue would be around the computer code that is used to analyse a massive loss-of-coolant accident and if there's a problem with that. Those were all successfully addressed by the organization, because the AECB continued to relicense and every year gave a report on every one of those reactors that would always say, "There are some concerns here, but continued public safety is not at risk and continued operation is okay."

On the one hand, you're getting a relicensing of the reactors by the regulator, and not until 1996 did they come down and say: "Here's a hammer on your head. We're only talking six months now. We're really serious this time." So that fits in with the kind of peer review time frame. Even though there are probably letters and documents that continue to talk around issues of concern, I've got to believe — I sat there. I tried to recall my first peer review that I saw from an organization. It's quite a document. They're available and you should read them. Every incident you read, you can understand. You say, "Boy, that sounds lousy. Why would they do this kind of thing? I don't understand that."

But you go through a peer review, and you read enough of them, and you have no — or at least I don't; I don't say you don't. I had a real difficulty, reading the words, in trying to understand the seriousness of this. "Is what I'm seeing normal? Does every utility see this? Is it out of normal? Is it worse or is it better?" Until we started assessing, that is, putting a grade on the plant, you can't expect the board of directors or a layperson or even a CEO, for myself, and this is international standards — until you put a rating on those plants, you really don't get an assessment, "Is this good, bad or indifferent?"

**Ms Lankin:** In that respect I give you credit for starting a process of actually putting the ratings on. I think my question is still valid as to why, for all of those years and all of those reports, the AECB didn't move management before that.

**Dr Kupcis:** I thought we had.

**Ms Lankin:** Let me now come to the point where you come into leadership. There is the change in the board chair. We have a new committee struck at the board. They're starting in on 1993 through 1994. They're starting to need the learning curve. They're meeting with the atomic energy board, starting to look at the safety issues. They also have a reorganization going on. I was struck when you said that 1994 was the best performance year in terms of the nuclear division. What I was struck by was that this was on the basis of output, production and cost —

**Dr Kupcis:** Right.

**Ms Lankin:** — and that safety wasn't an integral part of that —

**Dr Kupcis:** No.

**Ms Lankin:** — even though the concerns had been there. You were taking the steps, you were putting the peer reviews in; it still wasn't there. My question is, during that period of time as I reflect on it in our interactions during that period of time, was Hydro senior management, like the years before when they were concentrating and preoccupied with building and mega-plans and cost overruns of Darlington etc, at that point in time preoccupied with both the debt issue and the fiscal health of the organization and the development and promotion of Hydro International? Those are the two things that strike me most.

**2030**

**Dr Kupcis:** Sure, there's no doubt we were. That leads to my usual 16-hour days. I had a lot of things going on, and senior management, not the least of which was trying to renegotiate labour contracts, Hydro International, re-establishing the kind of new structure, new management team, all of that, but on the nuclear safety issue, I said yes, 1994 outwardly in any measure for the corporation would have been regarded as a huge — it met its targets on performance and cost, capability performance.

**Ms Lankin:** On the basis of moving to a competitive organization and a business unit but not the underlying issues.

**Dr Kupcis:** Yes, but we had the peer review starting, the first round of them, at that time and it wasn't that these were kind of dismissed and not acted on, because the board committee was very intrusive in establishing their expectation of concern that something be done about this. What we got, or I did anyway, through the board concerns was it pushed those expectations and responses on to the nuclear organization, the nuclear management. My expectation was that they had the capability, the skills, the knowledge, to provide the right kind of response plans that would address these issues.

So they were being identified, they were being passed for solution and carrying out. I'd have to give them the benefit of the doubt. We had some of the best technically trained individuals around running these plants. It turns out, and that's why I say the kind of light comes on, you get these repeat peers later on.

**The Chair:** We have time for one more round, but slightly truncated, so I'll cut you down to about six minutes a caucus and we'll go from there.

**Mr O'Toole:** My riding is Durham, and Darlington and Pickering, kind of in there, and safety obviously is a primary concern, and a concern of this committee. I've been somewhat removed, and involved in the emergency plan when I was on regional council. The openness with the community is somewhat at question. The very simple question: Are our plants safe, in your opinion?

**Dr Kupcis:** Yes.

**Mr O'Toole:** That's clear, and just a nice segue into — you mentioned in your last comment to Ms Lankin your involvement in your 16-hour days with the labour contracts. The HRM or cultural problem we've talked about was well known throughout the organization, it's my understanding. You've characterized it as kind of the

deterioration of the safety culture. That was your own characterization. Was it well known by the union as well, by Mr Murphy and other players within the organization?

**Dr Kupcis:** Certainly. I forget what year it was he became a board member and has been involved with and all along —

**Mr O'Toole:** Certainly a full partner.

**Dr Kupcis:** Absolutely.

**Mr O'Toole:** Has the HRM problem, as it was well known by the union, more or less co-opted top management from their kind of arms-length operational principles ahead of all other protocols within the contract situation? Do you understand? They have an important, serious supervisory responsibility, irrespective of contract language, safety being the overriding principle.

**Dr Kupcis:** Correct.

**Mr O'Toole:** Was that in any way compromised in the operational function?

**Dr Kupcis:** I think it turns out that it must have been, but it's through the interpretation of managers and supervisors of their limitations of action, or that they feel that there are barriers to it.

**Mr O'Toole:** I'm going to share my six minutes or six seconds with Mrs Fisher because she has a much more informed view, more specifically along those lines. I just have another general kind of question. What advice do you have for this committee for the future of Ontario Hydro Nuclear? Is it the primary supply side as it is today or should there be a fundamental change?

**Dr Kupcis:** Oh, no, I think this province would do its citizens a disservice if it didn't concentrate on the recovery of these facilities. There's no question. We had a report yesterday about the growing concern of acid rain, and this is after a 50% reduction around —

**Mr O'Toole:** Exactly, that's right.

**Dr Kupcis:** Wait until the population, globally, really gets excited about global warming. This is a technology that —

**Mr O'Toole:** Mrs Fisher has some questions on that line.

**Mrs Fisher:** I guess you answered the quickest one, do you believe all the units are fixable and should be? I think you just said yes to that.

**Dr Kupcis:** I think the issues in Ontario Hydro's culture are fixable. I think the training and the people and skills are all fixable. I think Pickering A units, personal opinion, because they've had the capital investment, once that's been proved, can be returned to service. I am not at all sure about the Bruce A units. Pickering A yes; Bruce A still faces a large capital investment. If we really have this competitive environment, then those capital investments will have to be judged on the basis of that plant being able to compete in the market. That will be a business decision.

**Mrs Fisher:** When Hydro moves into a community that is predominantly occupied by Ontario Hydro — that doesn't seem to be the way, as such, with other nuclear sites in the province of Ontario; it certainly is that way with regard to the Bruce project — I don't see that it is unlike anywhere else where if you come in — and I know



that Hydro has been an excellent partner in terms of financial support, in terms of absolute understanding with the community and disclosure of information and those types of things. My question now is this: Should Hydro not be responsible for considering the negative economic impact on that community as it makes its decision with regard to the order in which other units are brought up?

**Dr Kupcis:** I think that should always be part of the consideration. There are a lot of issues that have to be balanced, but on the community issue, you're absolutely right. We have an overriding presence in the Bruce community. Like it or not, we've displaced a lot of other presences that used to be there. So, particularly Ontario Hydro, as a crown corporation, as a public utility, has a corporate responsibility to look at those issues.

**Mr Kwinter:** Dr Kupcis, I really want to get back to your letter of resignation. I have a problem, and let me just explain it and I'd like to get your reaction to it. You are a chief executive officer. You've been there for two and a half years. You identify, first of all, as the chief executive officer of the largest utility in North America, Hydro Nuclear, which is a major component of Ontario Hydro, but still you have all these other things that you have to look after. You understand there's a problem, you want to quantify the extent of the problem, and you get Andognini to come in and do the report. Is that —

**Dr Kupcis:** His team.

**Mr Kwinter:** His team, yes. He comes in with the report that is very critical; nothing new other than he's quantified it. You decide, in your letter to Bill Farlinger, "I am resigning in light of the report of the nuclear performance advisory group." It would seem to me that the guy that should resign is the chief nuclear officer, not the president of the utility.

The other thing is, when we were talking earlier, you said you had talked to Bill Farlinger and you said: "There's going to be a new setup. It's going to be three different divisions, or three different entities that are going to be doing their things. We now need a different set of skills."

It would seem to me that if that was your feeling and if you were going to resign, you would wait until the white paper came out and you would have said "You know what? The government is taking this in this direction. My strength is in engineering and doing all of these things. We are working in a monopoly where I've been for 25 years. We're now into a whole new environment that is going to require marketing, it's going to require all of these things, and I don't think I'm the guy for it."

I just can't help but feel there's more to it than this, that as my colleague said, you've been asked to fall on your sword, or as in the Japanese culture where the president gets this terrible report and walks away and commits harakiri because he's lost face. I don't think you have any reason to have lost face. You're the guy that got the Andognini team in to quantify the problem, and somehow or other it just doesn't ring true that you would resign as a result of that.

**Dr Kupcis:** It's not one thing or the other thing, it is a combination and it's the environment we were in, but ultimately the biggest issue really is the impact the report would have on the corporation and the impairment of the asset base. Every CEO has an absolute obligation to not only maintain the assets, but enhance the assets of the corporation.

**2040**

**Mr Conway:** I'd like to pick up, because we have got just the last few minutes. You've been a very helpful and in many ways a compelling witness. Like Mrs Johns, I've heard those same stories and there are a lot of people around the beltway who are saying, "Boy, the wrong guy's taken the walk on this one."

**Dr Kupcis:** There is no other guy. Who's the chief executive officer?

**Mr Conway:** Listen, there's John Fox, there's Bill Farlinger. But let me finish. I feel like I'm being had. I feel like there is more to this story than I'm being told. Listen, at one level I admire the fact that you said, "It's on my watch and I'll take the walk." But I'd be a lot more impressed if a few others were walking down that plank with you. I'll be perfectly frank, because my sources tell me that the fight that's been going on is the fight between the full-blown privatizers, led ably by Bill Farlinger, and the Al Kupcises of the world who want to get into a competitive market all right, but want a substantial public enterprise called Ontario Hydro to be an altered but still significant enterprise in that new competitive order.

**Dr Kupcis:** Different issue.

**Mr Conway:** Oh, I don't think for this committee it is a different issue. I think it is a very collateral and very important and related issue. Are you denying that tension of choices I've just painted exists?

**Dr Kupcis:** Tension within the organization or anywhere within the electricity —

**Mr Conway:** No, within Ontario Hydro.

**Dr Kupcis:** It exists all over.

**Mr Conway:** Within the Ontario Hydro you have been a senior part of in the last three to four years, particularly.

**Dr Kupcis:** No, I had a clear mandate as CEO to —

**Mr Conway:** That's not my question.

**Dr Kupcis:** — develop the corporate strategy as it was approved by —

**Mr Conway:** Wasn't it your view —

**The Chair:** Mr Conway, please let him respond to your question.

**Dr Kupcis:** That was my mandate as CEO, to enhance, to work on that strategy.

**Mr Conway:** Is it not your view, and was it not your view while inside the senior levels of Ontario Hydro over the last three years that you were there, that yes, there would be a competitive market, and yes, there had to be a different kind of Ontario Hydro, but that there ought to be, in your view, a substantial public enterprise that was Ontario Hydro doing business in that new electricity sector?

**Dr Kupcis:** And that was our corporate strategy.

**Mr Conway:** That was your corporate strategy.

**Dr Kupcis:** The board approved the corporate strategy.  
**Mr Conway:** That's clearly not the corporate strategy of Mr Farlinger.

**Dr Kupcis:** I don't know that.

**Mr Laughren:** Dr Kupcis, did you brief, on a regular basis, the last two Ministers of Environment and Energy?

**Dr Kupcis:** I briefed, on a very regular basis, all the energy ministers other than the current one.

**Mr Laughren:** The reason I ask that is I was somewhat taken aback when the current minister said in the Legislature that he was not aware of the interim report, the IIPA interim report in April. It occurred to me that would be the kind of thing, I would think, correct me if I'm wrong, that a minister would be briefed on, because it was such a warning, such a shot across the bow, about what was going on in the system.

**Dr Kupcis:** I'm having some difficulty here because the April IIPA briefing to the board was all about process, all about what they're going to do, how they're going to do it, the kind of success or progress they're making and the timelines and the expectations to finish. That was the IIPA internal interim report to the board. So that was a process-based one which I wouldn't see being something that would be regularly reported, other than, "Hey, we're going to finish this. It's under way. We're going to finish it by such and such a date." The date at that time was in July some time.

**Mr Laughren:** When that same report came down in August you were still there of course as the CEO. Were you part of a briefing, at that point, to the minister?

**Dr Kupcis:** No, I wasn't.

**Mr Laughren:** Were you surprised at the standard rating, whatever the right words are, having dropped since April? Did that surprise you?

**Dr Kupcis:** The standard —

**Mr Laughren:** Yes, the minimally acceptable ratings and the —

**Dr Kupcis:** The minimally acceptable was the rating that is the only one I'm familiar with, and that's the one that was applied in the final report. I don't know of any other in —

**Mr Laughren:** The ones in April were not as harsh as the final.

**Dr Kupcis:** You must be talking about a document that was a team document, an internal, a partial; I don't know which one we're discussing here.

**Mr Laughren:** It was called the IIPA interim report, and it was dated April 17, as I recall. It's in my file papers here somewhere.

**Dr Kupcis:** Did it talk to findings in that report at that time? I wasn't aware of any.

**Mr Laughren:** Yes, the nuclear performance advisory group, Ontario Hydro Nuclear: Independent, Integrated Performance Assessment (IIPA), Phase 1, Preliminary Report, and it gives the standard ratings. It explains what A, B, C, D, E mean.

**Dr Kupcis:** I know the ratings. I don't know that report, though.

**Mr Laughren:** I thought the board was given this report. You're saying they were just updated as to the process.

**Dr Kupcis:** The board was given a report on the process and progress and timelines and expectations. That's my recollection at the board meeting.

**Mr Laughren:** Were you as surprised as Mr Farlinger was at the recommendation in Mr Andognini's final report in August?

**Dr Kupcis:** He didn't have recommendations, he had findings. The final report had recommendations only around what Hydro should be doing to address some of these concerns. The kind of asset optimization program wasn't part of it.

**Mr Laughren:** All I'm saying is that Mr Farlinger indicated to us that the remedies advocated by Andognini came as a surprise to him because he considered them radical.

**Dr Kupcis:** Yes, and I've got to assume he means that in order to fix this thing, let's take some seven units out and drydock them.

**Mr Laughren:** Correct.

**Dr Kupcis:** That was not part of the IIPA report. That's a subsequent discussion on how now do we deal with —

**Mr Laughren:** The recovery plan, sorry.

**Dr Kupcis:** The recovery plan issue, and so on. Yes, I think that was a surprise, the extent to which that needs to be done. Because the logical questions, as they were asked by some of the members of the committee, are: "Can't you find other people? Why do you have to do that? Why do you shut down anything at all? Concentrate on fixing these things, but keep these others kind of — they're minimally acceptable, they're safe to operate, and keep them operating, that way because it won't give you...."

Ultimately, in my discussions with the team and the senior management, I absolutely am not a believer that in the same organization you can ask for excellence in operation and safety culture in one part of it, and ask the management in the other culture, and not give them the resources to achieve it. It's the same way. I don't believe anyone should be operating a nuclear plant at a minimally acceptable level. I don't think any community should accept that. The issue should be making the progress to excellent.

**Mr Laughren:** But you do agree with the recovery plan recommendations.

**Dr Kupcis:** The first, for planning purposes, yes. It seemed like it's about our only option. I don't know the analyses that have been done subsequently, the other options that may have been tabled or other ways of doing it, but certainly for a first look for planning purposes I thought that was the only option that was around.

**The Chair:** Dr Kupcis, I'd like to thank you for attending the committee this evening. We have completed the rounds to begin with and I hope we might, if necessary, invite you back if there are further questions.

**Dr Kupcis:** If you find it's appropriate some time and I'm in the country, certainly.



**The Chair:** I'd be pleased, Dr Kupcis, to seek you out. I appreciate your forthrightness tonight; I know it's appreciated.

I'm going to ask members of the committee to stay where you are. The committee will go in camera. We have some business matters to discuss, so if members would keep their place. Dr Kupcis, again, much appreciation from this committee.

**Dr Kupcis:** Thank you.

**The Chair:** Perhaps members of the public could clear the room for us so the committee can attend to its business, please. While I'm waiting for the room to clear, I can mention to members of the committee that you have received documentation about topics to be addressed by Carl Andognini tomorrow.

*The committee continued in closed session at 2050.*











## CONTENTS

Tuesday 7 October 1997

<b>Atomic Energy Control Board</b> .....	H-64
Dr Agnes Bishop, president	
Mr Jim Harvie, director general, reactor regulation	
<b>Dr Alan Kupcis</b> .....	H-80

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H-6

H-6

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Wednesday 8 October 1997

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Mercredi 8 octobre 1997

Select committee on  
Ontario Hydro nuclear affairs

Comité spécial des affaires  
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## LEGISLATIVE ASSEMBLY OF ONTARIO

## ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

SELECT COMMITTEE ON  
ONTARIO HYDRO NUCLEAR AFFAIRSCOMITÉ SPÉCIAL DES AFFAIRES  
NUCLÉAIRES D'ONTARIO HYDRO

Wednesday 8 October 1997

Mercredi 8 octobre 1997

*The committee met at 1532 in room 151.*

**The Chair (Mr Shea):** The committee will be in order. There are two pieces of housekeeping business for the committee. If we disappear at about 5 o'clock, that is, the clerk and I, we will be attending upon the Board of Internal Economy to present the budget for the select committee. Mr Kwinter will assume the Chair. If we don't hear from him, that is, if there is white smoke instead of black smoke, then we will continue in the chair and continue doing what we're doing.

**Mr Sean G. Conway (Renfrew North):** There are reports that people sometimes never come back from the Board of Internal Economy.

**The Chair:** I understand they're still walking the halls up there, Mr Conway, still trying to seek direction.

At 5:45 I'll ask us to begin to wind down our questioning so we are able to take a moment as a committee to deal with the results of the subcommittee's deliberations over the noonhour. My understanding is that there will be a vote in the House at 6 o'clock, so wherever we are in the questioning I will gavel us down and we will move, as soon as the bells are ringing, to go to the votes.

## ONTARIO HYDRO

**The Chair:** We begin this afternoon's agenda. We have before us as our chief witness of the day Mr Carl Andognini, the chief nuclear officer for Ontario Hydro. Welcome. We appreciate your attending upon the committee. I know you probably have opening remarks you would like to make, so we're in your hands.

**Mr Carl Andognini:** Thank you very much. Good afternoon, ladies and gentlemen. I appreciate the opportunity to be here before this committee. I might deviate my remarks from my written text, but I don't think they'll change appreciably.

I would like to start by saying, first and foremost, that Ontario Hydro nuclear reactors are safe for continued operation. However, improvement in performance is mandatory to happen immediately.

I'd like to really start back when Dr Kupcis called me. I was living in Scottsdale, Arizona, and it was December in Toronto, so you could imagine how I felt about leaving Scottsdale. I came up and talked to Dr Kupcis. We came to an agreement. We agreed on what his expectations were, agreed that I could bring a team with me to allow me to move forward with a program. The mandate I got

from Dr Kupcis was that he wanted a real, frank and open assessment of the nuclear facilities at Ontario Hydro, he wanted a program of return to world-class service put together and he wanted an implementation program for that program. He also indicated that he wanted us to train our replacements to ensure continued performance after we left.

We got together and developed a methodology, based on a proven methodology used mainly in the United States, that consisted of two phases. Phase 1 was accumulation and a compilation of all the data that existed currently about Ontario Hydro Nuclear. We took previous plans, we took correspondence from the AECB, we took peer reviews, we took all the reports we could put our hands on and compiled that in a preliminary report.

Phase 2 of the assessment was to go out into the field and actually do verification and validation of the conditions we found in the accumulation of the data in phase 1. We found all the problems that had been identified plus a few that had not been identified in the collection of the data we took.

We reached the conclusion, after many hours, that these sites were operating at minimally acceptable levels, safe to continue operation, but required immediate improvement in performance. The main problem we identified is that in the late 1980s and early 1990s Ontario Hydro had a very strong, competent and capable engineering and construction organization that was building nuclear plants, but the need for electricity declined; competent people left, some with very lucrative packages offered by Ontario Hydro, and some very key, important personnel left.

In 1993 another major blow hit Ontario Hydro Nuclear when they did a decentralization program and put the three sites in competition with each other. That caused duplication, triplication and quadruplication of effort and the misuse of resources.

While we reviewed all these conditions we were concerned. As we did verifications in the field, we identified problems; in many cases, corrective action was taken immediately. But we deliberated for many hours on what the final results should be and came to a unanimous conclusion that the plants were safe to continue operation, but at a minimally acceptable level which was not acceptable for the long term.

We did provide these result and ongoing reports during the two-phased assessment to the board of directors and to the AECB. We've come to the conclusion that there's a



highly educated workforce here. All the people I have encountered so far want to do a good job. The Candu reactor of Canada is a robust design that's safe and efficient and has many advantages over the light-water reactors used in the United States. Two primary factors they have: One is the ability to do online refuelling, which should offer them an opportunity to have higher capacity factors; and the second is to utilize natural uranium instead of enriched uranium, which is of lower cost.

If operated and maintained properly, they can and will be very competitive in a marketplace for the future. We have a very difficult task ahead of us. The problems we have identified are not unique to Ontario Hydro. I would say almost all the problems we have identified have been found in the United States at one time or another. I can give you an example of a utility in Connecticut, Northeast Utilities, that was shut down in February 1996 for loss of configuration management and still has not started up. They were shut down by the regulator, given a prescriptive course of action to take, which caused much confusion, little planning and an excess amount of resources. They still don't have a clear plan to start that unit up.

Therefore, I think Ontario ought to be pleased, maybe not with the timeliness, but with the type of assessment that was undertaken by Ontario Hydro.

1540

It is without a doubt the only recovery program I know of that was not regulator-mandated. Therefore, it is a program based on a proven methodology that gathers the facts, does an integration of the results to develop an integrated, consistent program. As you're probably aware, the program recommended to the board of directors that we lay up the Pickering A and the Bruce A units and shut the heavy water facility down. How did we come to that plan? There is an option study — I'm quite sure that paper has been given to you — where we looked at six cases in much detail to review what should be done and how it should be done. I think that document is self-explanatory, but if you have questions on it, I'll be happy to answer them later.

In my conclusion, I'd like to refer to a problem that maybe I created, and if I've created it I'm sorry, but it's the problem of the five-year license. I submitted an application to the AECB prior to the conclusion of the IIPA report for a relicensing of the Pickering station. I very carefully did not include a duration for the license because I didn't want to pre-empt the AECB. Contingently, they may have wanted to extend the license for a month or two or issue a short-term license, so I left it at their judgement.

I received a letter back from them indicating that they had received my application for a relicense of the Pickering A units but they indicated that I remained silent on the duration of the license. I think you have a copy of a letter I sent back in response to that, where I went through all the reasoning why I thought Pickering was safe to continue operation and to indicate to them that I didn't believe, and still don't believe, that the duration of a license has anything to do with the ability of the regulator to control the licensee. What it does do, however, is take away valuable

resources, people and money from a troubled utility to prepare in depth for these relicensing applications. Why did I ask for five years? Because in many countries including the United States, reactors are licensed for five, 10, 15, 20 or even 40 years, and it doesn't reduce the ability of the regulator to take whatever corrective action it needs to take to ensure safety.

In conclusion I'd like to say that these reactors are safe to operate. We have a program together. I believe we have the competent resources to do it, to return the 12 units to world-class operation, to show the province of Ontario that we can improve and sustain the performance and allow the return of the Pickering A and the Pickering B units back to service.

**The Chair:** Thank you, Mr Andognini. As is our tradition, we will rotate by caucus. Today we will begin the questioning with the opposition party.

**Mr Conway:** Thank you, Mr Andognini. I particularly appreciate your last remarks around what has now become quite a famous letter in these proceedings, and we will be returning to that a little bit later this afternoon.

I want to focus my first series of questions on developments from your arrival in December from the sunny south of Scottsdale, Arizona, to wintertime in Ontario, which I think you said was the time you arrived, in December 1996.

**Mr Andognini:** That was when Dr Kupcis contacted me. It was about January 17 or 18 that I arrived.

**Mr Conway:** You arrived in January. You had a responsibility to, as you indicated — you became the chief nuclear operator at that time?

**Mr Andognini:** Yes, sir.

**Mr Conway:** And your mandate was essentially, among other things, to give that brutally honest assessment of what had gone wrong and to prepare a recovery plan. Very specifically, when did you precisely give your final report on the assessment and the related recommendations for recovery? When did you give that final report on assessment and the NAOP, or the recovery plan, to the Hydro board?

**Mr Andognini:** On August 12.

**Mr Conway:** On August 12, 1997.

**Mr Andognini:** Yes, sir.

**Mr Conway:** The board met on August 12, and 24 hours later a major announcement was made by Mr Farlinger to the province and the country about future directions for Ontario Hydro. Correct?

**Mr Andognini:** Yes, sir.

**Mr Conway:** You gave the final assessment and recovery plan reports to the board on August 12, 1997. Can you tell the committee, prior to the board — well, let me put it this way: Did you give to the board before their meeting on August 12, 1997, options to the recovery plan?

**Mr Andognini:** No, sir.

**Mr Conway:** So the board received the so-called recovery plan on August 12, on that date when the board was scheduled for a meeting.

**Mr Andognini:** Yes, and at that time we did discuss the options we reviewed.

**Mr Conway:** But the board did not have presented to it, at any time before that meeting, any kind of detailed options plan.

**Mr Andognini:** No, sir.

**Mr Conway:** Did the board request, or did you supply, any second opinion around the policy options contained in the so-called recovery plan which you had proposed?

**Mr Andognini:** I'm not sure what you mean by policy.

**Mr Conway:** Well, the question is twofold. Your recovery plan proposed an expenditure of between \$5 and \$8 billion dollars. Correct?

**Mr Andognini:** No, sir.

**Mr Conway:** It did not?

**Mr Andognini:** Not my proposal. My proposal required an expenditure of somewhere around \$1.6 billion. The remaining portion of what you're talking about is the cost for replacement power.

**Mr Conway:** That's correct. My question then is that the total package, as the chairman himself indicated on the 13th and confirmed in testimony here on Monday, was going to cost, all dollars in, somewhere between \$5 billion and \$8 billion.

**Mr Andognini:** That's the number that was —

**Mr Conway:** What I want to know, because this is really important, Mr Andognini — that's a big amount of money, and this Legislature, on behalf of the government, guarantees those dollars. Was there a second opinion sought by the board before the board made that critical decision on August 12, to the best of your information, a second opinion as to the plan you were proposing and the related costs of your plan?

**Mr Andognini:** Are you asking, did they receive a second opinion outside of Ontario Hydro?

**Mr Conway:** A second opinion, yes, outside of Ontario Hydro.

**Mr Andognini:** Not to my knowledge.

**Mr Conway:** You see, I think of a medical analogy. You have come as a doctor, as an outside specialist, and you have as that doctor given a brutally frank assessment of the ills confronting this patient, and the recovery plan you have recommended involves some very significant costs and implications for people like Mrs Fisher's community up in the Bruce. I think of the medical analogy. Did anybody ask for a second opinion, to the best of your knowledge? The answer is no.

**Mr Andognini:** Not by the board of directors. We had external experts participating in this program which consisted of about 75 people from Canada, from the United States and from internal to Ontario Hydro.

1550

**Mr Conway:** But to the best of your knowledge, there was no second opinion sought by the board to assess the policy aspects and the associated costs of the recovery plan that you gave to the board on August 12.

**Mr Andognini:** To the best of my knowledge, no sir.

**Mr Conway:** To the best of your knowledge, Mr Andognini, were you aware of or involved in any dialogue, any discussions with officials at the Ontario Ministry of Energy, the Ontario Ministry of Finance, the Cabinet

Office, the Premier's office, about the costs and the consequences of your recovery plan that was presented to the board on August 12?

**Mr Andognini:** Prior to the board?

**Mr Conway:** Prior to the board.

**Mr Andognini:** Was I personally involved?

**Mr Conway:** Were you involved or were you aware of any discussions about your recovery plan? Were you aware of or involved with any discussions between your team and its specific recovery proposal that involved senior officials or other officials in any of or all of the Ontario Ministry of Energy, the Ontario Ministry of Finance, the Premier's office or the Cabinet Office?

**Mr Andognini:** Not to the best of my knowledge. I know that we did review it with the AECB.

**Mr Conway:** Now, you mentioned, and I think it's very helpful, the experience of American utilities. A number of American utilities that operate nuclear plants are going through similar reviews. You mentioned the Connecticut example. Typically these American utilities, how many nuclear power plants do they operate?

**Mr Andognini:** Probably I can put it best this way: In my opinion and from the best knowledge that I have, Ontario Hydro is the largest nuclear power plant operator in the world. In the United States, excepting Commonwealth Edison, which has 12 nuclear plants, the Pickering station alone is larger than any other nuclear utility in the United States.

**Mr Conway:** That's very helpful. That's my understanding as well. I raise that question, Mr Andognini, because your recovery plan deals with a utility that has far and away the largest nuclear capacity. So you're attempting something here that is, quite frankly, unprecedented on this continent. Would that be a fair assessment?

**Mr Andognini:** Yes, sir.

**Mr Floyd Laughren (Nickel Belt):** Mr Andognini, welcome to the committee. I want to know who you are a little bit, because I don't at this point. It's my information that you were involved in the nuclear industry in the States and I wonder if you could tell me a little bit about the role you played at Boston Edison and at Arizona Public Service and at Sacramento public utility. We could start with Boston Edison and what your experience was there.

**Mr Andognini:** Prior to Boston Edison I was working for a nuclear utility also. I was contacted by Boston Edison in 1975 to see if I would be willing to come to the Pilgrim station, which was a troubled plant. It's a boiling water reactor. In 1975 it had the worse record of any boiling water reactor in the world. By 1978 we had put a program in place that turned the operation of that facility around to be the second-best boiling water reactor in the United States.

I was contacted by a headhunter in 1980 to go to Arizona Public Service —

**Mr Laughren:** Sir, do you mind if I stop you there.

**Mr Andognini:** Sure.

**Mr Laughren:** What kind of efficiency record was there at Boston Edison? Is there a percentage you use?



There is here, isn't there? Is there a certain percentage of capacity that it functions at?

**Mr Andognini:** Sir, I can't remember those. It was not only poor in performance from the capacity factor, it was poor in maintenance and in its ability to handle the problems associated with nuclear.

**Mr Laughren:** And then you went to Arizona.

**Mr Andognini:** Yes, sir.

**Mr Laughren:** And you ran — was it the Palo Verde?

**Mr Andognini:** I had responsibility for all generation, fossil, hydro and the startup of the Palo Verde nuclear plants plus all transmission.

**Mr Laughren:** And then you went from there to Sacramento?

**Mr Andognini:** I was contacted by Sacramento, a municipal utility that had a pressurized water reactor that had been shut down for 26 months by the Nuclear Regulatory Commission. They were in trouble. We went there. I put a team together again. We built the development plan, we implemented the plan. We were one month over schedule and substantially below budget. I left in December 1988 and in June 1989 the county of Sacramento had a vote to shut the nuclear plant down.

**Mr Laughren:** They voted to shut it down? Why did they do that?

**Mr Andognini:** For the life of me, sir, I can't understand, because they had just spent a tremendous amount of money. It was, without a doubt, one of the better mechanically and operationally oriented plants when we got done with our program. It was running well, it started well. I don't know. I think it was just political, anti-nuclear movement.

**Mr Laughren:** In the whole county. It was a county vote, not a state vote.

**Mr Andognini:** It was a county vote, sir.

**Mr Laughren:** When you were recruited, Mr Kupcis I guess directly recruited you.

**Mr Andognini:** Yes, sir.

**Mr Laughren:** You said that you wanted to bring a team with you. How many people came up with you?

**Mr Andognini:** Six.

**Mr Laughren:** Six. Did it stay at six during your analysis of Hydro's problems? Sorry, were you made the chief of the nuclear division right away?

**Mr Andognini:** Yes, sir.

**Mr Laughren:** And did the six stay with you?

**Mr Andognini:** And they're still here, sir.

**Mr Laughren:** Right. Did you recruit other people from abroad, from south of the border or elsewhere?

**Mr Andognini:** Yes, and I had to be very careful how I did it because I got accused by many people of being an American spy up here to shut the Candu reactor option down.

We wanted to and we did build a Canadian program for the Canadian reactors and we utilized as much Canadian talent as we had. We have limited resources with nuclear experience here and I did call on and have some additional staff here from the United States. We are looking for additional staff. We need additional staff badly, but we

can't use untrained personnel. It's very difficult to get those. We're looking at the United Kingdom now for people who might be available from the British program.

**Mr Laughren:** How much would you estimate the IIPA analysis cost Ontario Hydro?

**Mr Andognini:** Approximately \$4 million.

**Mr Laughren:** For the analysis.

**Mr Andognini:** Yes, sir.

**Mr Laughren:** That included the cost of your team —

**Mr Andognini:** Yes, sir.

**Mr Laughren:** — as well as other people coming in and so forth. Did you know very much about Ontario Hydro when you were recruited or was it a steep learning curve when you got here?

**Mr Andognini:** I knew something about Ontario Hydro because if you're in the nuclear business, you know pretty much, at least in North America, what's going on in the nuclear business. I knew that they had some trouble at Ontario Hydro. I didn't understand and realize the magnitude of it until we had completed the IIPA, and I had no experience with the Candu reactor.

**Mr Laughren:** Did you have any trouble getting information when you moved into your position at Ontario Hydro?

**Mr Andognini:** Absolutely none at all.

**Mr Laughren:** And you had a good working relationship with the AECB as things went along?

**Mr Andognini:** Well, you need to understand that Ontario Hydro had lost the trust and respect of the AECB. For many years they had been sending letters and giving indications of poor and unacceptable performance. When we got here, one of the first things we did was to look at the commitments that were made to the regulator. They got volumes of books that were that big of commitments that were made. We did an analysis of that data and found that the utility was responding on time about 40% of the time and that they had some commitments that were seven years old. So it's no wonder that the utility lost the respect and trust of the regulator. We're working very diligently to regain that. It's not going to be an easy battle, but we're willing to undertake it.

**Mr Laughren:** As a matter of fact it's interesting you acknowledge that, because Dr Bishop from the AECB, who I'm sure you know by now, made the point yesterday that Ontario Hydro was very good at developing proposals and promises but very bad at delivering on them. I think basically you're saying the same thing as Dr Bishop did.

1600

**Mr Andognini:** When we developed the first phase of the IIPA, we looked at all of those recovery plans that had been generated from probably 1993 on through, and yes, there has been failure on the utility's part to perform.

**Mr Laughren:** Were you given basically blanket authority when you took on the position of head of the nuclear division?

**Mr Andognini:** No, I don't know anybody that's given blanket authority. I had excellent working relations with Dr Kupcis.

**Mr Laughren:** That's who you reported to?

**Mr Andognini:** Yes, sir. I kept him totally informed of everything that I was doing.

**Mr Laughren:** It must have taken some time for you to get brought up to speed on all of the problems. Did that occur before you actually got into the IIPA?

**Mr Andognini:** It's been a constant learning curve, sir, and I'm still learning and I'm still finding problems.

**Mr Laughren:** Did the chair of Ontario Hydro — who was not Dr Kupcis, right?

**Mr Andognini:** Right.

**Mr Laughren:** It was Dr Kupcis who recruited you. Was he part of conveying to you the severity of the problems at Hydro?

**Mr Andognini:** No, sir.

**Mr Laughren:** It was Dr Kupcis.

**Mr Andognini:** I did not meet the chairman of the board or any members of the board until after I came here.

**Mr Laughren:** When you first came — and this is a subjective question, I appreciate — was there an aura of defensiveness at Hydro about you coming here and the task to which you had been assigned?

**Mr Andognini:** At some levels of the organization within nuclear it was natural to have some defensiveness about us and what we were all about and the uncertainties that lie ahead, certainly.

**Mr Laughren:** Was that in the lower, middle or higher echelons of the nuclear division.

**Mr Andognini:** I think there was some at all levels, sir.

**Mr Doug Galt (Northumberland):** Welcome, Mr Andognini. I'd like to explore some of the human resources. I have questions in that general area. I'm intrigued as I read through your report, you're talking a lot about a lack of authoritarian management. As I read the report and look at it, I would suggest too much authoritarian management has been going on, as I look at some of the comments that are made in there. Certainly over the last three decades we've talked a lot about participative management in the work place. Let me give you one example that you use in there, that bad news is not being passed up through the system. To me, that is a hallmark of an authoritarian management system. Can you explain to me why you think it should be more authoritarian than it presently is?

**Mr Andognini:** I don't agree that it should be more authoritarian. I think there should be more accountability in the people. One of the things we're doing that's very lacking in the organization is developing a management system developed by Dr Elliott Jaques, who is originally from Toronto. It's called requisite organization. This defines the responsibilities, the authorities, the accountabilities and the skills required for every job in nuclear, starting with mine to the lowest level. What I have found is a lack of accountability and a lack of managerial skills.

**Mr Galt:** Okay, I have no problem with the accountability; I think that's just excellent. But throughout the report it's mentioned repetitively, "lack of authoritarian management." That one was bothering me and you've

kind of helped to explain it there, because that was not what the report was saying as I read the details in it.

**Mr Andognini:** Okay.

**Mr Galt:** Now, we're talking human resources. You're in charge of this. What are your credentials to do something about the human resources aspect of this problem?

**Mr Andognini:** Am I allowed to?

**Mr Galt:** What are your credentials? What do you have as a background? What's your experience in human resources?

**Mr Andognini:** I recruited a team for Boston Edison and made a turnaround team there. I recruited a team in Sacramento for a turnaround at the Sacramento municipal utility. I'm going to have to depend heavily on people with human resources skills within Ontario Hydro. Ontario Hydro just recently hired a senior vice-president of human resources who has extensive experience and is going to be very helpful for us to get the skills.

One of the major things we're doing is, after the 1993 decentralization many of the support services were put on a fee-for-service basis. Training was one of them. Training then went from a reasonably good program to almost a non-existent program. So we're going to increase substantially the training program, which is the backbone of any industry, and we're going to put in a program to allow individuals to get retrained on a periodic basis.

Fortunately, in Canada you have a very extensive program for licensed operators. It takes about four years. They're extremely competent, they're very capable, and you have other skills in Ontario Hydro that are very capable but are deep in desire for leadership.

**Mr Galt:** Just to continue on the questioning of Mr Laughren, I've had a lot of people come to me about the numbers of American license plates in the employee parking lot. They're saying there are large numbers. How many Americans have you hired, working under your hand?

**Mr Andognini:** There could have been that, sir, when we were implementing the second phase of the IIPA, because we had about 80 people here —

**Mr Galt:** At that time?

**Mr Andognini:** At that time there were many of them, Americans here. Now there's six —

**Mr Galt:** Just to clarify, at one point there were 80, during the second phase?

**Mr Andognini:** Not all Americans, but a substantial number of Americans.

**Mr Galt:** Thank you. Just moving along on the same, human resources, you mention in there about the problem with collective agreements and you're even suggesting that we should legislate that Ontario power workers couldn't go on strike, similar to police and firefighters. Could you expand on that opinion?

**Mr Andognini:** I believe that electricity is a necessity of life and I believe that people should be compelled to fulfil the requirements for the province of Ontario. I think one of the necessities of life, such as hospitals and firefighters, is electricity.



**Mr Galt:** You caught me off guard when you were making your presentation about competition starting in 1993 between the three different sites. We read a lot in the Macdonald report about competition and I, for the life of me, cannot recall, and I may be wrong, anything in there about there being competition within Ontario Hydro at present. Could you expand on what's been going on, competition between these three sites? You were talking about triplication between the three sites and you just caught me totally off guard on that one.

**Mr Andognini:** I'd be very happy to, sir. When we first came here, we had to take radiation training, which I assumed would be a standard program throughout the entire Ontario Hydro nuclear facilities. It is not. The implementation of the program is inconsistent from site to site. In 1993, when they decentralized, they moved most of the functions from corporate, so there was no corporate overview, and each site was doing independently what it wanted to do.

They're all Candu reactors. I'll agree that there are different models of Candu reactors, but some of the changes that were being made were being made at the three sites, three different ways, by three different engineering facilities, by three different implementation facilities and costing a tremendous amount of money, when they all could have been done one way.

**Mr Galt:** So were they truly competing?

**Mr Andognini:** Well, they were competing for resources.

**Mr Galt:** Competing for resources but not for putting power out on the lines.

**Mr Andognini:** They had their own goals and their own objectives for their plant that weren't integrated into a nuclear program.

**Mr Galt:** It almost sounds like a counterproductive type of competition, from what you're telling me?

**Mr Andognini:** In my opinion, very much so.

**Mr Galt:** Could we discuss for a few minutes about the safety? The people of Ontario, following your report coming out, are very concerned about the safety of these plants and what's going to happen. How safe are these plants? Are the people in Pickering, Bruce or Darlington in jeopardy?

**Mr Andognini:** Not at all, sir. In my opinion, the design is a very robust, safe design. It is designed to have two separate, independent shutdown systems that don't require operator action for 15 minutes. In the United States the design is different. It depends on operator action after an abnormality, where here it does not. You have a very safe design system. You have highly trained operators.

You have a decline in performance. There is no single indicator that you can look at, like a car being detected by the police with radar. You have many, many performance indicators to look at. When you look at them in a cohesive manner, you're getting a decline in performance; since 1994, clearly. You were at a 74% capacity factor; this year you will be lucky if you hit 60%.

**Mr Galt:** We were seeing figures back into the 80s earlier.

**Mr Andognini:** Sure they were. The decline in performance will, if not corrected, challenge the safety system. There's no doubt about it. So it is imperative that we turn the performance indicators around to ensure that doesn't happen.

**1610**

**Mr Andognini:** Sure they were. The decline in performance will, if not corrected, challenge the safety system. There's no doubt about it. So it is imperative that we turn the performance indicators around to ensure that doesn't happen.

**Mr Galt:** In spite of your minimal acceptable rating, you can assure the people of Ontario that there's not going to be any kind minimal or maximum disaster occur in those locations?

**Mr Andognini:** No one can ever guarantee anything 100%, sir. To the best of our ability, to the best of the team's ability, to the best of the consultants we've got together, and it has been confirmed by the AECB independently, the units of Ontario Hydro are safe at this time to continue operation.

**Mr Galt:** How quickly do you think this can be turned around?

**Mr Andognini:** To start to turn around? We haven't reached the bottom yet, sir. We're still identifying problems. The program that we gave the board of directors has to be a living document, it has to change to include things that we identify, but I anticipate that by mid-year next year you'll see a turnaround and an increase in performance. There are many, many ways we have already made substantial changes to enhance performance.

**Mr Galt:** You talked about phase 1 and phase 2. I also understand you are coming in with monthly reports to the board?

**Mr Andognini:** The evaluation was based on two phases. It was an integrated process that developed one report for the board.

**Mr Galt:** But you were giving them an ongoing report on a monthly basis, keeping them abreast?

**Mr Andognini:** We reviewed the program that we were going to utilize with both the AECB and the board. As a matter of fact, at every monthly board meeting I gave periodic updates on the nuclear option. In May, I think it was May 17, there was a telephone board meeting and at the request of the chairman I gave them an assessment of what we had found in phase 1 and at that point we were starting validation in the second phase and what we had found there.

**Mr Galt:** While you were giving these reports, you were developing this nuclear asset optimization plan; in other words, a recovery plan?

**Mr Andognini:** We didn't develop that until after we had completed the assessment, gone through all the evaluations, determined whether indeed these reactors were safe to continue operation. We did a basis for continued operation and then got together as a team to develop the program from the data we obtained.

**Mr Galt:** Both of these reports were presented to the board at the same time, on August 12? Is that my understanding?

**Mr Andognini:** When you say "both reports," I'm not sure what you mean.

**Mr Galt:** Your IIPA report and the recovery plan.

**Mr Andognini:** Yes, sir.

**The Chair:** Mr Andognini, just a response back to a question. You confirmed the date of that telephone board meeting.

**Mr Andognini:** I believe, to the best of my knowledge, it was May 17.

**The Chair:** Of this year?

**Mr Andognini:** Of this year, yes.

**The Chair:** Of 1997.

**Mr Monte Kwinter (Wilson Heights):** Mr Andognini, I want to follow up on my colleague Mr Conway's —

**Mr Andognini:** Sir, could you do me a favour and speak louder because I've been in power plants for many years and I can't hear very well.

**Mr Kwinter:** Okay. I'll be happy to. I want to follow up on my colleague Mr Conway's questioning about the timing of your report and the recovery plan. It is my understanding from Mr Farlinger when he was here that members of the board received the IIPA a week before in their regular board minutes. I guess they got a week to review it before they came to the board meeting, so they had a chance to see your report, but didn't see the recovery plan report until they got to the meeting and that was presented to them. Is that a fair evaluation of what happened?

**Mr Andognini:** To the best of my knowledge, a preliminary package was sent to the board, I think two weeks before the board meeting. It did not include all of the data and it did not include the options that were reviewed and it didn't include the recommendations. That's to the best of my knowledge.

**Mr Kwinter:** That's fine. The reason I wanted to clarify that is that almost immediately after the government announced that they were going to strike this committee, the chairman and I, and I don't remember who else, were invited to a board of trade breakfast to hear Mr Robin Jeffrey, the head of British Energy. I sat at a table with the chairman and in a conversation I was critical of the fact that the terms of reference that had been set out were that we were to come up with an interim plan by October 3, which is 17 calendar days after the committee was struck — not until it was approved, until it was announced. He indicated to me, and I'm paraphrasing, that that was no problem, "When you hear the results, you'll be able to make the decision very quickly."

I was critical of the fact that the day the report became public at that August 12 board meeting, the board also approved the recommendations for the recovery plan. I said, "How could you possibly do that that quickly?" He said: "Very easily. You'll have the same opportunity. You read the report and you look at it and you see they've made this decision and you say that's the decision."

I want to go back to the minutes of that particular board meeting and I want to quote. Once the presentation was made, "Mr Bullock," who is a recent appointee to the board, "expressed the opinion that while the safe operation of Hydro nuclear facilities is of the highest priority, he is concerned that the board has not had sufficient information and opportunity to exercise the due diligence required for approving the NAOS decisions which will have very wide-ranging impacts."

Not only his concern, but Ms Clitheroe, who was here with the chairman and who is the chief financial officer of Ontario Hydro, "supported Mr Bullock's proposal. In particular, he suggested that financial impacts surrounding the program be further reviewed and challenged by the board." Notwithstanding that, the board approved it.

The other concern that I have is that in your plan, which is the basis for recommendation, you talk about the options. There are six options. You narrow it down to number 5, and possibly number 6, but in each one of them you say, "The implication of costs associated with the decommissioning and write-off of the Bruce A units are not included in these costs," and you say, "These costs are substantial."

You're saying \$1.7 billion for the actual work, plus another maybe \$5 billion or \$6 billion for energy replacement, but what would be a substantial cost?

**Mr Andognini:** We have the best consultant I know of in the world currently evaluating decommissioning cost for Ontario Hydro. His name is LaGuardia. He's done probably all of the decommissioning studies in the United States. I'm not able, because I don't have the best data available, to give you what the decommissioning cost will be for the Ontario Hydro reactors. When that report is made available, we'll be glad to share it with you.

**Mr Kwinter:** I've sat on several public boards. It would seem to me that any decision that was taken by a responsible board acting in a reasonable man approach would say, "Before I make a decision, how much is this going to cost and who has validated these costs?" as opposed to later on in the discussion, and here we have Mr Bill Farlinger who used to be the head of Ernst and Young, a chartered accountant, considered by many in his profession at the top of his profession, recommending: "Don't worry about the costs. We'll worry about that later. Let's approve this thing."

I can tell you that if he was sitting on a board and he had responsibility for financial advice, he would not give that advice. If he did, he would probably drummed out of the chartered accountants' association. What I'm trying to come to grips with — and I have no way of evaluating your six options other than by looking at the numbers. I am not a nuclear expert of any kind and I have no way of doing that, but I do have the ability to look at these numbers and say, "Are they really the numbers?" If they're not — and there's another quote in your report that struck me, and that is, "No nuclear electric utility has accomplished a turnaround on this time frame involving more than two units and most efforts involve substantial non-generating periods."



So we have another imponderable. You're saying: "It's never been done on this scale. It has never ever been done, but we think that this is what could happen." Now the history of Ontario Hydro has been, and we've heard it from Dr Bishop and we've seen it over a period of years, is that they keep coming up with these grandiose plans and they never, ever materialize.

1620

Dr Bishop said they do not have the ability to implement these plans. You yourself have said that you saw all these volumes of material, 40% of which have been complied with. Others which go back years have never even been addressed. So my concern, and I would think the concern of anybody who's interested in this issue, is that we have a plan that's approved by the board at one meeting, first time they've seen it, no defined financial numbers, parameters, other than "Trust us. It's in this range but we'll let you know as we go along," and they make this decision. I think there's a real crisis of responsibility when that happens.

Secondly, you in your report and the AECB in their letters over the years have indicated that we have a utility that does not seem to have the ability, regardless of whose responsibility that is, to deliver what they say they're going to deliver. Yet you're asking the people of Ontario to pick up a burden that could be, whatever the number — it ranges from \$1.7 billion just for the hardware kind of adjustments, plus the energy replacement, and it keeps going up from there — but you've said you're still learning the problems. You don't even know what all the problems are and yet you've gotten approval, sort of a *carte blanche*, or you want to get the approval, to go ahead and do it. I know that it's been a long kind of thing, but if you could respond, I'd appreciate it.

**The Chair:** Actually it took up all your time, so I will have to move along to Ms Churley.

**Mr Andognini:** I've marked him down and I'll return to him later.

**Ms Marilyn Churley (Riverdale):** Mr Laughren is going to begin. He's got five minutes.

**Mr Laughren:** Mr Andognini, I was fascinated, like my colleagues to my right, at the speed at which the recovery plan was accepted by the board. As a layperson in the field of electricity generation, it looked to me as though this was not a thoughtful plan for recovery, it was only a nuclear plan for recovery. I wondered how you could possibly come to that conclusion when you had not seen the white paper that the government was developing in order to bring Hydro into the next century, in terms of competition, policy and so forth. I'm wondering how you could do that. Weren't you worried about starting this process and having the government say: "Oh, hold the phone. That's not the direction we're going. We've got other plans for Ontario Hydro and for the general mix of power generation in the province?"

**Mr Andognini:** First of all, to follow up on your question and the concern of the previous gentleman, the board did approve, fundamentally, the program. We were mandated to come back to the next board with sufficient data

to respond to the question that was raised by the director, Bullock. We've had subsequent meetings since then. When we undertook this, we were chartered to look at these facilities and come up with a recommendation. When we decided that these recommendations were going to have a major impact on the utility, we brought in the financial people of Ontario Hydro and the generation people from Ontario Hydro, covered the options available with them, reviewed the costs associated with it and went through an analysis of what was in the best interests of the province of Ontario to return these units to world-class performance.

**Mr Laughren:** I understand that, but did you meet with the Minister of Energy?

**Mr Andognini:** Sir, I did not.

**Mr Laughren:** Have you ever met with the Minister of Energy?

**Mr Andognini:** I met the Minister of Energy when I first got here, as an introduction, but I don't believe I have spoken with the minister. Yes, I did; excuse me. He did tour the Pickering station and I met him at the Pickering station.

**Mr Laughren:** I really am somewhat taken aback by the fact that you come up with only a nuclear solution. Maybe it is the right solution. I'm not prejudging because I don't know. But I find it somewhat breathtaking that you do this in a vacuum, in the absence of a white paper which says this is the direction the government of Ontario's going to be going in generation policy.

**Mr Andognini:** Sir, I wouldn't expect you would expect me to know the politics of Ontario coming here. I don't, and I don't claim to. What we did is what we were mandated to do. I know we did an excellent job. I'll stand behind the job that we did. I can't sit here and defend the board or say the board was right or wrong. I'm not capable of doing that.

**Mr Laughren:** No, but all I'm saying to you is that before you'd launch your corporation on to an expenditure plan of \$5 billion, \$6 billion, \$7 billion or \$8 billion, you'd need to know that this fit with what the direction of your political masters, theoretically at least, want the corporation to go. That's all I'm saying. I don't blame you, because you're there as the head of the nuclear division and that's what you want to do. That's your baby, the nuclear division. Why wouldn't you want to do that?

**Mr Andognini:** From the data that I have seen, and the reviews that were conducted by the people on alternative energy sources, it is inherently in the best interests for the province of Ontario to return these units to service, to get them up to a level at which they're capable of performing, and to return the other units to service, compared to the cost of alternative energy sources in Canada.

**Ms Churley:** Thank you for appearing before us today. I want to get back to some of the nitty-gritty, some of the technical stuff here. I recognize, as do my other colleagues, that we're not nuclear experts, but I think that there is — the word's been used frequently around here — a cult around this, and I think it is possible to break it down for people to understand to some extent what is

going on. I'd like to break that silence, or start that, around that kind of cult around it, and hear how you got to some of your solutions which you recommended.

I want to ask some practical questions, like for instance, why did all the nuclear stations, regardless of how old they are, or when they were built, receive the same minimally acceptable rating? Do they all need the same upgrades? I'd like to know if you can actually present us with an itemized list. If you can't today, will you be able to present us with that, the big ticket items like the steam generator tubes, which are a lot of money? I would like to see the committee be able to understand exactly where this money is going. My question is around that: Why did they all receive the minimum acceptable standard? Can you provide an itemized list as to what the repairs are going to be? Are they going to be the same at the different plants?

It's my understanding that when Hydro initially announced the closure plan, and correct me if I'm wrong, you would first go to Darlington B — no? — and then you would move on to the A stations, and that plan has now changed. I'm not quite sure why that would happen, why you would start spending on the A.

I know that's a lot of questions and my time is probably up but I'd like to come back to it later.

**Mr Andognini:** I'd be happy to go in and I'll be very happy to answer them all for you. It's very difficult for me to remember which questions you asked.

**Ms Churley:** The itemized list, I believe.

**Mr Andognini:** If you could ask them one at a time, it would be a lot easier for me and I'd be better capable of giving you a complete answer.

Yes, I can provide you a list as to why they were individually evaluated. If you look at the chart, you'll find that some had improvements in some areas compared to others but they all were managed by the same type of management system and were allowed to get to a minimally acceptable level. I will provide you a list, if you so desire, of the major projects that need to be undertaken.

I would say very clearly that what we uncovered at Ontario Hydro was probably in the ballpark of 75% to 80% personnel-related, and the other, material condition of the plant.

1630

**Ms Churley:** Why is going to cost so much then? I don't understand.

**Mr Andognini:** I'll give you a fine example. Configuration management: It's very easily said, very difficult to be understood. Configuration management is what caused the NRC to shut down three reactors in Connecticut. Configuration management consists of the complete design basis, the complete as built of all its systems and all the drawings and all the piping and all the electrical and all the mechanical; it includes all the vendor manuals that are there, that are updated for the current modifications that were made. This is not complete at Ontario Hydro right now, and it's going to take a substantial amount of money to get that program in place.

Equipment qualifications is another. The ability of the components to sustain the condition of an accident such as

the steaming room and things of that nature needs additional work. There are items that haven't been resolved yet. One of them is the polyvinyl chloride cabling in the Pickering unit. The steam generators, obviously, at the Bruce station A need some attention. We're working on those very carefully now on unit 3 and 4, doing eddy current testing. Those are some —

**Ms Churley:** Could I interrupt just a second? You're saying that you are still discovering problems which may add to the cost, that the cost we already have is a ballpark cost because you're still in the process of discovering physical problems in different plants.

**Mr Andognini:** Ma'am, you're absolutely right. The recommendation that we've made to the board clearly indicated that it did not include discovery work because we were incapable of determining what the cost impact would be for work we didn't know.

**Ms Churley:** The question about where you're beginning — you were shaking your head about the report on which closure comes first in terms of the As and Bs, getting a success story first, before you move on.

**Mr Andognini:** First, I don't like to use the word "shutdown." We're laying the units up. We need a licence to lay the units up. In order to bring those units back, we've selected the Pickering units first because they have recently had retubing of the reactor tubes and their steam generators are in better condition. We do have to add some removal of the copper in the condensers, but that's all going to be done before the A units are restarted. But looking at them all collectively, the best material condition is at Pickering over Bruce. I'm sorry to say that to the Bruce people, because it has a major impact to the people in Bruce, more of an impact than it does at the Pickering station. But that's the reason they were selected. It wasn't just arbitrarily selected.

**Mrs Barbara Fisher (Bruce):** I'll try to be quick with my questions because I have a whole pile of them. I would like to break them into about three areas. One is the AECB and its relationship with Ontario Hydro; the second is the staffing issues; and the third is the Bruce site you were just talking about. Given that it does have eight of the 20 units, it is a significant part of this whole program.

We had Dr Bishop before us yesterday, and she talked about the relationship with Ontario Hydro. It has already been stated that although it's a very professional and business relationship, I would maybe sum it up by saying that there's dismay and distrust with Ontario Hydro, distrust only because of the fact that they continue to put repair programs and improvement programs together and always fail, if you will; I guess that's another way of saying they never reach the achievement levels of bringing any success to those. They're somewhat discouraged with past performance.

In your opening statement you referred to a recovery plan that is not regulated. That tweaked something with me.

**Mr Andognini:** A recovery plan that was not regulatory-mandated I believe is what I said.



**Mrs Fisher:** Thank you for clearing that up. Now I'll go on with the thought, given that you've planted the seed of a thought. Maybe Ontario Hydro, with its non-success of achieving improvement plans, should be regulated. Let me ask you this question: Do you think it would be a good idea that AECB should approve that recovery plan so that it does meet the requirements and we discontinue spending hundreds of millions of dollars on plans and activities that turn out to be nothing?

**Mr Andognini:** The answer to that is yes, and I believe that is currently being done. It's my understanding that the staff at the AECB in Ottawa is undertaking a review of that. Don't quote me on this, but it's my understanding that they're going to report back to the AECB board, I believe in November, on the results of that. We have been in constant communication with them. We have given them all the data they've asked for. They've been to the offices and seen all the support data we have, so they're currently evaluating it.

**Mrs Fisher:** I think that would be a different format, though, in that it would be something that would have to be approved before implemented, as opposed to approving the license after the implementation and hoping for success. There's a difference there of level of authority and mandate.

**Mr Andognini:** I shouldn't speak for the AECB and I can't speak with authority for them, but I think their concept is that it is the licensee's responsibility to ensure safe operation of those facilities.

**Mrs Fisher:** Yes, that's right.

**Mr Andognini:** I believe that's the philosophy and the basis on which the AECB works.

**Mrs Fisher:** But I just put a thought out here that maybe it's about time that instead of just being the one that oversees and makes sure, in fact they're a partner in the proposal as opposed to approving the plan before implementation — of course not enacting the work; that would still be Ontario Hydro's work. Then there'd be somewhat of a shared onus for successful recovery as opposed to another attempt at recovery.

**Mr Andognini:** I don't believe it's a regulatory requirement to have that happen, but it is currently happening. It's my understanding that they will have that report before we intend to implement anything, before we lay up any of the units. We have not proceeded only with the implementation of the management systems required to put the performance indicators in place, and we're doing other things that don't require AECB involvement or approval. But the implementation of the plan has not started yet, and I believe we'll respond to all their questions prior to that.

**Mrs Fisher:** I'd like to move on to the staffing issue. We've had great discussions over the past days on staffing and the tradeoff of recovery options, if you will. Three issues on staffing that were brought out over the past number of presentations were adequate numbers, adequately or inadequately trained, and culture.

In 1993, which I know you're not responsible for, there was a significant downsizing announcement to Ontario Hydro staffing. I can again only refer to the Bruce site as

an example, but it was predicted, and I think most of it came true, that 708 nuclear jobs were lost at that site. Would you agree today, since we're in the "What happened and why" atmosphere, that that might be part of the problem now? One of the major concerns in your whole recovery plan is inadequate staff. Would you agree that perhaps by laying off those trained nuclear workers, we find ourselves in this position today?

**Mr Andognini:** Absolutely. When the need for the plants reduced and they offered lucrative packages in the 1980s, it had a substantial impact on the program. Another substantial impact was the downsizing that was done in 1993. I would like to correct one thing you said. You said "people culture." The primary thing we're saying is resources and managerial skills.

**Mrs Fisher:** I said the culture of the workforce, not necessarily — but anyway, we've had some discussions that there are trained nuclear workers available. I would like to hear from you whether you would agree that a nuclear worker in a non-Candu system can be trained to be a nuclear worker in a Candu system.

**Mr Andognini:** Yes, I believe that's true, but you've got to remember that you just can't throw resources at a problem and you just can't throw money at a problem. That's what's been happening for the past few years. You've got to manage both money and resources to get productive work out of it. The management systems that are required to do that don't fully exist at Ontario Hydro Nuclear today.

1640

**Mrs Fisher:** If we knew there was a pool of unemployed or those desirous of transfers, I guess starting with some of our past laid-off workers — Hydro invested hundreds of millions of dollars in training those people. Those are people who had up to eight years' experience who were fearful of losing their job with no package so they took it, and then in the end found out they might have survived this issue anyway. We could start with those people, a buy-in-Canada plan to start with, and then where there was a shortfall, get them from the US or Britain or France or wherever, where we have in the past through the Candu system recruited people. Would you agree that if we could get more of those people on staff today, there might be an alternative solution to the length of the layoffs we're talking about? I'll leave it there, and then I'll talk about, why Bruce?

**Mr Andognini:** No, I don't believe that. First of all, we've got to turn the performance around, and as I indicated, you can't just throw money and people at it. We've got to put in management systems and we've got to train people to be managers, to hold the people they have working accountable for the tasks that have been assigned to them.

Bringing on more resources sometimes causes you a decrease in productivity when you don't have the management systems in place, so we have got to be very careful. Bringing people in from the States is not the best thing to do. I have already been accused, as I indicated, of bringing too many Americans in now. We have got to

utilize as many Canadians as we humanly possibly can, and we're doing that. Yes, we are looking at people who have taken early retirement. We have brought some of those people back. There are many people who were dissatisfied with the decentralization in 1993. We have brought some of those people back.

**Mrs Fisher:** My concern is that we have brought back the management side of it. I don't see a lot of the tradespeople being rehired. I live on a street that has three of these people. I gave an example yesterday of one who is dealing cards in Casino Rama right now and would much prefer working for Hydro. My recommendation yesterday was that perhaps we accept the fact that there was a mistake made. The money is spent and done, yet there is a resource out there that I think would be very helpful, even if we didn't look at the A recoveries immediately but even some of the B recoveries we're talking about. I'll leave you with that. It's not a question.

**Mr Andognini:** No, and that's a fair question. Again, I have to say I just can't throw resources at it. We will be starting in the first of the year — I already told the board in September that I can't wait for the board to give me approval to restart the facilities and then have the people available. I've got to start in January of next year to bring the resources in, to get them adequately trained. It takes four years to get a licensed operator in Canada. We can't wait four years to start; we've got to start now.

**Mr Conway:** Mr Andognini, I'm going to ask the staff to give you a paper called Ontario Hydro Nuclear: Basis for Recommendation Provided in the Nuclear Asset Optimization Plan. Are you familiar with this document?

**Mr Andognini:** Yes, sir.

**Mr Conway:** It bears the date of September 29, 1997. That date is fully six weeks after the Hydro board met on August 12 to approve the recovery plan. With this paper in mind, I want to review again some of the ground we chatted about earlier. You presented to the board on August 12 the full and final report of the assessment, the IIPA, and the recovery plan?

**Mr Andognini:** Yes, sir.

**Mr Conway:** This options paper was not part of that package, correct?

**Mr Andognini:** Sir, that's not true. It was verbally reviewed with the board, and that's one of the things the board told us in the September meeting at Thunder Bay. They wanted these options and considerations documented so they could have them to totally review them, to ensure that everything was in order.

**Mr Conway:** But it's important for me to be clear. I'm trying to imagine that I'm a board member. This is really important. I'm like Mr Laughren. You have obviously done thorough work here, and this is a very substantial report with very significant consequences, not just to the utility but to the province, its credit rating and an awful lot of people. So I'm a board member. I get the final report of the IIPA and the recovery plan on the day the board meets to make some decisions, apparently. That's correct, right?

**Mr Andognini:** That's correct.

**Mr Conway:** What I want to know is, have I at this point or at any point before that got options in some kind of clear and understandable context before me, against which I can assess your specific plan of action for recovery?

**Mr Andognini:** At the board meeting on August 12, sir, we gave the board a presentation that included slides that showed these options, so they had the options there, but they were not documented in a paper like this.

**Mr Conway:** And they would not have seen them in any real form before that either?

**Mr Andognini:** Like this?

**Mr Conway:** Yes.

**Mr Andognini:** No, sir.

**Mr Conway:** What I'm trying to grapple with here is the big picture. You have come in, you have done your work and you have now made this recommendation to a board of directors that we find out acts almost immediately. There is very little discussion of options; there is no independent assessment of what you're proposing. As Mr Laughren said, it may be the right course of action, but to the best of your knowledge, before the board made its decision on August 12, there was no independent assessment of your recovery plan, correct?

**Mr Andognini:** Yes, sir.

**Mr Conway:** And there was no independent financial analysis of the true costs?

**Mr Andognini:** Ernst and Young came in and did report to me, and I'm not sure who brought Ernst and Young in —

**Mr Kwinter:** I'll tell you who brought them in.

**Mr Conway:** We can imagine, but carry on.

**Mr Andognini:** I really don't know. Brought in for an independent review that was provided to the board at the September board meeting.

**Mr Conway:** After the decision had been taken and announced?

**Mr Andognini:** Yes, sir.

**Mr Conway:** What's stunning to me as a former cabinet minister is this is a major decision with multibillion-dollar consequences. It may be the right course of action. I, as a generalist, certainly can't say it is not, but having served in a cabinet, I do know that any proposal with these kinds of consequences would, in the normal course of events, have been put through a fairly elaborate process for independent assessment, attack, validation. Since the province guarantees the debt of Ontario Hydro, this is a decision which, because it ultimately commits the utility to X billions of unplanned expenditures, is going to be of critical importance to the Minister of Finance, among others.

So here I am now left with this situation, notwithstanding all the good work you did in a very short period of time. I've got a potentially \$8-billion decision taken by the board of Ontario Hydro on the very day that the board has seen the final assessment report and the final construct of the recovery plan. There has been no second opinion. Nobody that you're aware of has talked to the Minister of Energy about the specifics of this. It's like the patient who



knows he is not well, goes to a doctor and the doctor says: "Conway, I'm telling you you're in bad shape. We think you're recoverable, but your left arm and your right leg are going to have to be amputated." I'll tell you, the patient in those circumstances would normally seek a second opinion at the very least before he submitted to this kind of surgery, which in the end may be the only course to be taken. It's just — Jim Rusk doesn't want me to use the word "breathtaking." I won't, but I tell you, as Mr Kwinter indicated, it would leave a lot of people associated with cabinets and boards of directors speechless.

I guess I want you to tell me, what kind of discussions did you have with Bill Farlinger over particularly May, June, July and August 1997 about the recovery plan and the kinds of impacts, financial and community, that it was clearly going to have as you developed it in your mind? What kind of conversations do you recall having with Mr Farlinger on that subject?

1650

**Mr Andognini:** Personally?

**Mr Conway:** Yes.

**Mr Andognini:** None that I can think of.

**Mr Conway:** None that you can think of? You see, I look at this decision, made on the 12th of August and announced with much fanfare on the 13th, and I ask myself, thinking about the ultimate responsibility for this, "Was this decision endorsing your recovery plan taken on the 19th floor or on the 19th hole?" Because you didn't talk to Mr Farlinger, the minister has stated repeatedly that he didn't have a very keen appreciation till very late in the day as to what was going to be proposed, and we've got Clitheroe and Bullock on record as saying they had some very real concerns about cost. How do we tell the people of Kincardine and Ontario that due diligence was taken by the corporation before this very significant recovery plan was approved and announced, with its consequences, in places like Kincardine and elsewhere?

**Mr Andognini:** Sir, I'm not challenging what you're saying. I'm not sure how you expect me to answer that.

**Mr Conway:** I'm just searching for who knew what and when. I repeat what Mr Laughren said, that you appear to have worked along at a pretty good pace, apparently, through the winter and spring. I just can't imagine that this kind of decision would be taken. To the best of your knowledge, nobody talked to the shareholder? You're not aware of anyone in your circle who talked to the Premier's office, the Cabinet Office, the Minister of Energy's office or the Minister of Finance's office about this multi-billion-dollar recovery plan?

**Mr Andognini:** Am I personally aware that someone has had communications with those offices of the ministers about this plan and its details prior to the board meeting?

**Mr Conway:** Yes, that's correct.

**Mr Andognini:** Not to the best of my knowledge.

**Mr Laughren:** There are days when I'm glad I'm not still the Minister of Finance in Ontario; it's not every day. But I would change the doctor-patient analogy that my friend Mr Conway used, because it seemed to me that

what we had here was the patient telling the doctor what had to be done. That, to me, is what bothers a lot of us. To coin a phrase that others have used before I've used it, the same people who got us here are now telling us they can get us out of here, in terms of the problems in the nuclear division. It's not a new problem. What I'd be interested in knowing is, what confidence should we have that this same nuclear division, namely you, that has come forward with the recovery plan, the same ones who got us there — although you weren't there, I appreciate that. But the people you must rely on have been there for a long time, and you have to now rely on them to get you out of this pickle. I'm wondering where you get this confidence. It's an American trait, perhaps.

**Mr Andognini:** It's the confidence we have as a team based on experience. We have experience. We have seen failures. We have seen successes. We have seen what confusion has been caused by mandated recovery programs. We have put together a program that's integrated, and it's totally independent of anything that was ever done before. It's a complete assessment to the best of our ability in the time in which we completed it. Yes, we are still finding problems. We're identifying conditions. We're taking corrective action.

One of the things I believe — and I hope you don't take this as being egotistical, because it's not meant that way — is that I can't do anything about what happened in the past. I believe we can provide the leadership that's so necessary to put the managerial skills in place to turn this performance around. I believe you've got the ability, you've got the technical competence and you've got the desire in the workers to do it. They just haven't been led properly.

**Mr Laughren:** That assumes, of course, that the nuclear option is the one your political masters will deem to be appropriate.

**Mr Andognini:** That's not a choice I can make, sir. Whatever I am told to do, I'm here to do it to the best of my ability.

**Mr Laughren:** I understand that. It sounds to me like it's full speed ahead.

**Mr Andognini:** It certainly is not full speed ahead. We were given approval by the board of directors for the expenditures for 1997. It is mandatory on our part to take the nuclear optimization program, to put it into a business case and a budget to be presented to the board. What we are going to do is, not only present the 1998 business plan and budget, but for reference, the 1999 also. We're going to treat it like it's a business and run it like it's a business.

**Ms Churley:** I'm just going to come back to one of my earlier questions, because you're right, I asked so many questions. I think the most important question I asked was not answered. Perhaps I asked it in a confusing way, so I'm going to be very clear. I think this is very important.

When the recovery plan was announced, the approach adopted to reinvestment in the A units was to hold off investment until turnaround time of the B units and Darlington was proven. What I want to know is, is that still the approach: no reinvestment in the A units until the

turnaround at the Bs and Darlington? That's the specific question I was trying to ask.

**Mr Andognini:** Let me repeat it, so I make sure I understand what you're saying: The program as currently outlined is to lay up the A and B units to show increased performance and sustained performance on the Darlington, the Bruce B and the Pickering B units, prior to the return of any units to service. Is that the question you asked me?

**Ms Churley:** My understanding is that the original recovery plan was to adopt the recommendation at that time, to hold off investment in the A units until the turnaround at the B units and Darlington was proven. I just want to know if that is still the plan or has that changed?

**Mr Andognini:** It has not changed.

**Ms Churley:** So that is the same. Okay, good. Coming back again to your ability to itemize what needs fixing, you are able to do that now, particularly at the A units before the restart, or you will be able to do that in the near future? You will be able to provide that for this committee? If you can't now, when could you do that?

**Mr Andognini:** Let me tell you what I can give you. I can give you the items that are necessary to put the management systems in place, the programs in place, the material condition changes that are required, the whole assessment program, which includes bringing the Pickering A units back to service but does not include any discovery work, and it also starts the return of the A units at Bruce without the work that's necessary, like steam generating replacement and the reactor vessel tubes. I can get that data for you. When would you like that data?

**Ms Churley:** As soon as you can make it available would be great. You're saying that it's ready to be made available now, or as soon as you get the —

**Mr Andognini:** No, it's ready now.

**Ms Churley:** Good, so as soon as you can make it available to the committee.

**Mr John O'Toole (Durham East):** I want to make a little start in a broader way. Mr Conway referred to this report, which I will be referring to.

**Mr Andognini:** I can't quite hear you, sir.

**Mr O'Toole:** Mr Conway referred to the basic recommendations provided in the nuclear asset optimization plan, that executive summary. I have a couple of questions in that area. But I want to start by saying that in your self-introduction — your background is pretty much nuclear recovery — you mentioned that one of the stations you worked at was other than nuclear, it was fossil or —

**Mr Andognini:** No, that was the Arizona Public Service Co, where I had what they called electric operations. At that time the nuclear units were not operating, they were in startup. So I had non-fossil and the startup of those nuclear units.

1700

**Mr O'Toole:** Much of this may be conjecture, opinion, your own professional attitude. Is nuclear generation the best option in the long run for Ontario, in a deregulated market, and are we competitive with our neighbours in that marketplace, in nuclear, fossil or hydro?

**Mr Andognini:** When you say "neighbours," I'm not sure who you mean.

**Mr O'Toole:** Quebec, Michigan, Manitoba.

**Mr Andognini:** I can't speak on anything about Quebec, except that I know Quebec has a lot of hydro and that obviously should be cheap power. I can't speak too much outside of Ontario. I can speak some to the United States.

As I indicated before, I have become a very strong supporter of the Candu reactor. It has advantages that other light-water reactors don't have. The Germans currently are operating Siemens-built pressurized-water reactors, which are similar to the Candu reactor but doesn't have online refuelling, with capacity factors of 90% to 91%. If they can do that with a pressurized-water reactor that requires a shutdown to refuel, with these systems properly maintained and properly operated, you ought to be able to compete with that very easily. Generating at 90% capacity factors with these units makes your cost very low.

**Mr O'Toole:** I think I've heard that a couple of times and you have said it as well previously, so I appreciate that.

I'm trying to pursue the deterioration that we heard about from a couple of presenters. From about 1985 right to the present there has been a steady decline in performance behaviour, productivity, from 85% to some 60%. Do you think there's any particular cause? It was characterized as a culture or cult situation. I'm not putting those words in your mouth, but could you explain in some other, less formal terms what that means? Does it mean that they've never got out of a design-and-build attitude, that the operate-and-maintain attitude hasn't really emerged? What is needed to turn around management?

**Mr Andognini:** I'd be very happy to try and answer that for you, sir. First of all, I never used the word "cult."

**Mr O'Toole:** It's been used.

**Mr Andognini:** It has been used and I prefer that it didn't relate to me, because I don't like the word "cult."

**Mr O'Toole:** Nor do I.

**Mr Andognini:** As I indicated before, when the need for electricity levelled off in Ontario, they offered very lucrative packages and lost some of their very competent people who had designed these facilities.

**Mr O'Toole:** Can I interrupt here for a second? That's sort of where I'm going. I think that the existing management structure — it's my intuition, if you will, that when they had those packages they created a pretty serious situation of a shortage of resources themselves, the current management team — or some of them are still there — by allowing that to happen. Who came up with that brain-wave?

**Mr Andognini:** Sir, I can't speak to that. I only know that it happened and that they lost good people, they lost competent people. As I indicated before, the downsizing in 1993 and continued reduction in budgets caused the nuclear performance to deteriorate.

**Mr O'Toole:** I have two more questions. I don't want to get too locked up here. Do you think much of the British privatization model, to become more, if you will, competitive without necessarily just being the bottom line? Look-



ing at performance and recovery plans in a competitive model, is that kind of where you'd like to aim?

**Mr Andognini:** My aim is not whether to privatize or not. That's a decision that is not up to me. My direction is to turn the performance around, to bring these to world-class —

**Mr O'Toole:** Do you need that momentum to do it? What kind of synergy do you need to create in the workplace for that accountability you've talked about? You've mentioned it. You've characterized it as the most important part of the management system, the accountability of the system. I'm trying to get to if there's a \$5-billion recovery plan or an \$8-billion recovery plan, none of which has ever worked. We've heard that from 1985 they've never had one recovery plan work. They promised in 1985 at Bruce that in 10 years they'd have it fixed. That was 1995 and it still isn't fixed. Would you have any confidence in that kind of recovery? I'm like Mr Conway and everyone else; I wouldn't put five cents on it.

**Mr Andognini:** Certainly, sir, if there wasn't a problem, I wouldn't be here.

**Mr O'Toole:** What's the accountability? How are we going to get the accountability culture —

**Mr Andognini:** The accountability starts with me. I need to ensure that we start to treat people like we'd like to be treated ourselves. However, to do that, we have to hold people accountable. We have to train them, we have to mentor them, we have to coach them. We didn't get bad overnight, we ain't going to get good overnight. It's like a great big elephant. We can't swallow it all at once but we sure as hell can if we chew it one bite at a time. We're going to take it one bite at a time. We're going to turn the performance around. We're going to treat people the way we'd like to be treated ourselves. We're going to train the people, we're going to coach them, we're going to mentor them and we're going to manage them.

**Mr O'Toole:** With 19 reactors, would we be overcapacitized in nuclear?

**Mr Andognini:** I don't believe so, because if we had 19 or 20 reactors operating in the capacity factor between 85% and 90%, you could sell all the power you could generate south.

**Mr O'Toole:** So it would drive unit costs down the more you output?

**Mr Andognini:** In my opinion, yes, sir.

**Mr O'Toole:** So we're really suffering a short-term penalty by decommissioning seven — and for the right reasons. You said you can't just put in money and people, you have to make the systems accountable. Are you going to set some kind of pricetag and some kind of achievable outcomes in a management-structured time frame that says, "I'll deliver these things by X and if I don't, see you later," right? Is that what we're going to do?

**Mr Andognini:** It's not as clear-cut as that.

**Mr O'Toole:** We're looking for that, though. We're looking for who is going to spend the \$8 billion. I've looked in your report here and I said I was going to refer to it. We've picked the most expensive recovery plan. In your case, you used \$1.7 billion for hardware. Your re-

port, page 1 of the executive summary, case 5, which is the two A stations down, is \$4,000,400,000. In that it says it doesn't include buying the other fuels necessary to create the power. The decommissioning costs aren't part of that? What is the cost to decommission Bruce — \$100 billion? I think it's just out of this world.

**Mr Andognini:** I can't tell you, sir. I told you, we're having that studied right now. I know what it costs in the United States to decommission a pressurized-water reactor. I have those numbers.

**Mr O'Toole:** Is it \$5 billion, \$10 billion, \$150 billion?

**Mr Andognini:** It's \$500 million.

**Mr O'Toole:** That's quite inexpensive. I've heard it's more like —

**Mr Andognini:** What did you say, sir?

**Mr O'Toole:** That seems rather inexpensive as one of the options.

**Mr Conway:** C.D. Howe has children.

**Mr Andognini:** That's the best estimate for a pressurized-water reactor currently being decommissioned.

**Mr O'Toole:** The other part of this is the whole decommissioning process, the long-term contamination, the storage issues. I have two of the reactors in my riding. Darlington and Pickering are both in Durham and I like to think of myself as living there for the rest of time. They still have to truck the waste to Bruce. They haven't even got a plan that I know of. How do they even get rid of the fuel? It's still in the swimming pools. I don't think they're too far along in the technology part of it.

**Mr Andognini:** I disagree with you, sir. The technology is available to handle radioactive waste. It's a political issue in Canada, similar to the United States.

**Mr O'Toole:** How do they handle it in the States?

**Mr Andognini:** They don't. It's not there yet.

1710

**Mr Kwinter:** Mr Andognini, in the first two days of our hearings, one of the items that kept coming up that people commented on was your letter of April 16, 1997, to the reactor regulator. I understand — it's been explained to me by Mr Farlinger and I think Dr Kupcis said the same thing — that you come from an environment where you virtually get an open-ended licence but the regulator can shut you down anytime or put you on some kind of restricted use based on their particular findings.

I don't really have a concern about the fact that you indicated it would be nice to have a 10-year licence but certainly you're asking for a five-year licence. When Dr Bishop was here, I asked her what the shortest licence you can get is, and she said six months. I asked what the longest is, and she said two years. When I asked what the reaction to your letter was, she said: "Who cares? They can ask for whatever they want. That's not what they're going to get."

A couple of things concern me. I didn't get the chance to ask her a question because we ran out of time, but I read between the lines and I had it corroborated by watching television this morning and what she said in a scrum outside. She said Pickering was put on a six-month licence, and when it came up for renewal it was like a put

or buy. In other words, you can't get another six-month licence; if you get another six-month licence, they shut you down. You have to — well, not necessarily a nine-month, but you have to get an improvement or they have no choice. They can't keep you going on a six-month licence, because that's the lowest category, sort of the red alert.

The reason I'm saying that is that it would seem to me that if you're really making progress, they'd say: "Okay, you're really doing great. We're going to put you on a one-year licence." That has happened before. Mr Lévesque said that when they applied for the two-year licence in 1989, I think it was, they got a one-year licence. The reason I'm saying all of this is that it's a prelude to this letter that you wrote. I don't want to dwell on the term of the licence, but where I have a concern is that here we have a situation where, as I say, Dr Bishop went out of this room and in a scrum said, "We came that close to shutting them down." It was very, very close.

At that time — you've been there a couple of months, and you still say you're discovering problems — you apply for this extension of your licence and you point out all the things that have been accomplished that would justify that extension. I have the letter and it goes through the whole thing, all these wonderful things that Ontario Hydro Nuclear has accomplished. The very next day, the board gets their interim report, in which you highlight all the deficiencies that in your letter to the reactor regulator you say are in hand, have been improved, that things are going on. How do you square that?

**Mr Andognini:** Let me try to answer that. I'd be happy to do that. When we do an assessment of this nature, we don't look for the good things. By nature it's designed to identify and bring forward the bad. There are good things occurring at Pickering station, but we don't look for that in that assessment. I didn't make a report to the board on April 17. The report you're talking about was a report from the team to the team captain that was not distributed to Dr Bishop, nor was it distributed anywhere. We did review the results with the AECB. We did provide an overview of that, plus some validation and verification, in the May 17 board meeting, but that report, sir, really was not valid for me to issue. It was just a compilation of the data that already existed. It would be like showing the end of the ballgame before you play it. We needed to go out and verify and validate what we found in the accumulation of the data before we could report it.

**Mr Kwinter:** I'm not terribly concerned about who you reported it to and everything else, but here was a report that you were aware of when you applied for that licence extension. Regardless of whether it was interim, whether it was raw data, you had material that indicated all these shortcomings, and at the same time you as the head of Ontario Nuclear are applying to the reactor regulator for a five-year extension. As I said, the five years is not the issue. You're applying for an extension and you're pointing out all these wonderful improvements that have been made, that things are looking great. Obviously, if

you're asking for five years, you think things are pretty good.

**Mr Andognini:** I didn't say things were great. I said that we were confident that the facility was capable of safe continued operation. That's the strongest single point we made in that letter. It was carefully worded to identify that these units were safe to operate.

First of all, I don't think your statement is correct that they can't give you two six-month licences in a row. She came that near to shutting them down the first time — that's what she said — and that probably was a wise decision. She gave them a six-month licence. I asked Dr Bishop two weeks ago in her office, "Have you seen any improvement?" She said, "Well, I need to tell you, Carl, you have to show sustained performance, but we did give you from a six-month to a nine-month licence." To me that indicates that at least the AECB is also seeing some improvement at the Pickering station.

**Mr Conway:** Carl, if I can pick it up from there, you are the current chief nuclear operator for Ontario Hydro.

**Mr Andognini:** Yes, sir.

**Mr Conway:** That means that you're part of some kind of senior management team at Hydro, right?

**Mr Andognini:** Yes, sir.

**Mr Conway:** Mr Farlinger is currently the acting president, I believe.

**Mr Andognini:** Yes sir.

**Mr Conway:** Following on Mr Kwinter's questions, I'm trying to now understand how the management culture is working at Hydro. In the last six to eight weeks, let's say, since the departure of Dr Kupcis, how often would the senior managers meet with Mr Farlinger to talk about operational activities?

**Mr Andognini:** We meet weekly on Wednesdays for two hours, and whatever time is necessary for me to bring him up to date, I can have whatever time I need.

**Mr Conway:** So you are meeting then with Farlinger on a weekly basis and other senior managers to talk about various implementation strategies and other things.

**Mr Andognini:** Yes, sir.

**Mr Conway:** You mentioned in the previous round that to the best of your knowledge, some time before that board meeting on August 12 — correct me if I'm wrong — someone, probably the chairman but you weren't sure, had asked Ernst and Young to come in and do an independent — just take us through that again. You mentioned that Ernst and Young —

**Mr Andognini:** I'm not sure of the date, but I think it was after the board had reviewed on August 12. Please don't hold me to this because I'm not 100% sure.

**Mr Conway:** To the best of your knowledge.

**Mr Andognini:** To the best of my knowledge, Ernst and Young was brought in to do a financial review after the August 12 board meeting.

**Mr Conway:** I want to just one more time mention that this options paper that bears the date September 29, 1997 — I presume it was prepared in this form and given to the board some time on or about September 29, 1997?

**Mr Andognini:** Yes, sir. That report —



**Mr Conway:** That's all I need to know.

**Mr Andognini:** Just the documentation of it was requested at the September board meeting. We put it together and gave it to them about that date.

**Mr Conway:** I was interested in the previous exchange with perhaps Mr O'Toole; I can't remember who it was on the government side. You reacted quite viscerally to this cult business. I think I can understand that. In mid-August, an individual who was asked to comment about what had gone wrong at Ontario Hydro Nuclear was reported in the Toronto press as having offered the following commentary, and I quote now directly: "that the nuclear unit was operated over all those early years as some sort of special nuclear cult. I'm told this is not unusual in utilities elsewhere in the world." What would say about that kind of analysis?

**Mr Andognini:** I know there were problems with the management of the utilities in the United States, and I don't want you to think for a minute that there are not some problems at some utilities today. I don't believe there was a cult — and I don't like that term — but I do believe it was a program of heavy engineering involvement. I believe that also occurred in Canada.

I personally believe, and I've said this before, that we're overengineered and undermanaged. There are times when engineers got together in the United States — and I'll have to tell you truthfully; I know, because I was one of them in the program — where engineers thought they knew everything, that we knew how to do accounting, we knew how to do finance, we knew how to do everything. We learned very rapidly that we weren't so smart as we thought we were. I wouldn't consider it a cult. I would consider it overengineering.

1720

**Mr Laughren:** The MBA programs in the last few years in this country have been filled with engineers. Perhaps some of them came from Ontario Hydro. I don't know.

I want to pick up on the difference between your interim report of April 17, I think it was, and the final report, and the difference in the performance ratings in those two reports. That goes from April to August, and I can't remember the date at which you asked Dr Bishop if things were getting better.

**Mr Andognini:** I asked Dr Bishop approximately two weeks ago Friday, in her office.

**Mr Laughren:** I found it strange that between April and August the performance ratings in your report would go down for Ontario Hydro, in that short a period of time.

**Mr Andognini:** You have to remember, sir, that the first phase of that report looked at the data that were available; in April we had the summary report. By then, the second phase had already started and we had identified problems. We had taken corrective action on those problems that we thought were important to safety, and we continued to improve. The results of the August report — the validation and verification of the data were done approximately a month before that. It took a month or maybe even more to take all the findings we had, review them

thoroughly to ensure that we knew what we were talking about, and to agree on the safe approach, presenting the data to the board.

**Mr Laughren:** I want to be clear on this. Between April and August, did the performance ratings drop because you knew more?

**Mr Andognini:** I don't think the performance ratings dropped from April to August. What you saw was the result of an investigation that started in February and went through to probably — gosh, I wish I could remember — some time in June. We originally were supposed to have the data to the board at the July board meeting and we weren't ready, so the board allowed us to go August.

I don't believe there is any inconsistency in what we found. While this examination was going on, we were making changes — we had provided directives, we had made some management changes, we had done some other things — even while the assessment was going on. We weren't just standing still while the assessment was being conducted. If you want a list, we have a list of things that have been done since January, complete on everything we have done.

**Mr Laughren:** I'm not suggesting there were inconsistencies. What's puzzling me is that the performance ratings dropped between April and August. I was surprised at that. Between the interim report and the final report, the performance ratings were lower.

**Mr Andognini:** I don't believe we gave ratings in the April report.

**Mr Laughren:** Yes, you did. I don't think I have it here. Anyway, I will revisit that.

**Mr Andognini:** I may be wrong, sir.

**Mr Laughren:** Okay. I wanted to ask you questions about your comments in your final report about labour, workers in the system. You were quite critical — and I don't know much about the collective bargaining agreement between the Power Workers' Union and Ontario Hydro.

**Mr Conway:** A likely story.

**Mr Laughren:** No, I don't. In a report that was heavily laced with technical material and opinions, there was suddenly this rather pejorative subjective policy analysis about labour relations. I'm somewhat puzzled by that, because it didn't seem to fit with the rest of the report. I am wondering if you've thought about that since the report and to what extent you still hold the view you expressed in your final report about the inability of the corporation — these are my words, not yours — to manage properly because of a restrictive kind of collective bargaining agreement.

**Mr Andognini:** All I can say is that we reviewed it, we talked to the management people, we had both union and society members on our team, we talked to union stewards. We did not talk to union officials or society officials prior to giving the report to the board, because I have done many, many assessments and have never discussed the results with anyone prior to discussing it with the people who requested the assessment.

I think there are some difficulties in the current labour agreements that would assist us, if we could get some concessions, to turn the reactors around in a more positive manner. I just don't want you to think that we don't have competent people in the union and the society, because we do, and they have a deep desire to do what is right. I'm not here to criticize union management either. But I can tell you, I don't think Ontario Hydro used the best judgement in some of the collective bargaining they accepted. That's based on my experience in the States.

**Mr Laughren:** Dr Kupcis, when he was here last night, implied — I don't want to exaggerate anything that Dr Kupcis said, and my colleagues will correct me if I'm wrong. I don't think he appreciated very much what you had to say in your report about that. His view was more in keeping with what you said just now: that that's Ontario Hydro's fault, not the fault of the workers there. Ontario Hydro was part and party of those collective bargaining agreements, just as much as the union was, so it shouldn't be seen as —

**Mr Andognini:** I think that's exactly what I just said, sir, in a different way.

**Mr Laughren:** Yes, more than you said it in your report.

I'm going to back to the interim that my friend Mr Kwinter has just handed me, April 17.

**Mr Andognini:** I have it here in front of me.

**Mr Laughren:** You're faster than my research department is.

You can see what the grades are here.

**Mr Andognini:** Those are grades from overall evaluation of the team that did the collection and the review of the collection of the data, based on AECB reports, WANO results, which is the World Association of Nuclear Operators, from peer reviews. Just from the assessment of the data, this is the type of grade you would give just looking at the data.

These data are what was available to us when we got here. We asked for everything we wanted. We got cooperation, we got the data, we reviewed it, had it reviewed by several teams. The teams got together, and these are the grades they gave generally, based on those results. Those aren't particular to any one site.

**Mr Laughren:** As opposed to the final report.

**Mr Andognini:** Which is by site.

**Mrs Helen Johns (Huron):** Thank you, Mr Andognini. Your presentation today has been really informative.

The first question I'm going to ask probably won't have any bearing for you because you haven't been here for the last three days, but let me just ask. When you were hired by Dr Kupcis and you were given instructions on reviewing — correct me if I'm wrong, but it was to review just the nuclear facilities and make recommendations — were you ever told to consider making Hydro more readily available for privatization to be one of your mandates also?

**Mr Andognini:** Absolutely not.

1730

**Mrs Johns:** Okay.

We've been talking for the last two or three days about this interim report that's come out and those data you just talked about. Dr Kupcis yesterday seemed to be very unsure about this report. Can you tell me who got a copy of that report?

**Mr Andognini:** Me.

**Mrs Johns:** Just you?

**Mr Andognini:** That's right.

**Mrs Johns:** Not Mr Farlinger? Not Dr Kupcis?

**Mr Andognini:** No. When we reviewed this program and outlined this program, I asked the team to give me a preliminary report that I wasn't to give anyone because it was a preliminary report based on data review only. Dr Kupcis did not see it. The board did not see it. I don't believe anybody saw it. The reason it came out was through the freedom of information act.

**Mrs Johns:** That's interesting. Thank you.

When I talk to people about you, just trying to get a background in what experience you have —

**Mr Andognini:** Maybe I should leave now.

**Mrs Johns:** — one of the things they say to me is, "All his experience is American." You must think you have some expertise to be working in Canada. With respect to technology, management and human resources, can you tell me what's comparable about it and what you find substantially different that may affect the IIPA report?

**Mr Andognini:** The Candu option is different, but it has some of the same characteristics that a pressurized-water reactor has, which is utilized in the United States. The regulatory environments are different between the two countries, the culture is different between the two countries, but I don't think that hampers anyone. There are great companies throughout the world that take Canadians and bring them to America to work. There are Canadian companies that bring Americans to Canada to work. I don't think that hampers the ability to put a managerial program in place and implement to achieve world-class performance.

**Mrs Johns:** When you wrote this famed letter about the five-year extension — I know you don't want to second-guess the Atomic Energy Control Board, but at that time would you have said that Pickering A deserved to have an extension of their licence or should have they have been closed down?

**Mr Andognini:** Today?

**Mrs Johns:** No, at that particular point. When the Atomic Energy Control Board was reviewing that six-month licence that had just come up for renewal and moved it to nine, do you think the Atomic Energy Control Board made the right decision or at that point should they have closed down Pickering A?

**Mr Andognini:** When they reissued the licence for nine months?

**Mrs Johns:** Yes.

**Mr Andognini:** If I thought the reactor should have been shut down, I would have shut it down.



**Mrs Johns:** I'm interested in the recovery plan. I've moved into that process of it. If we were to go with exactly the system we have right now, stay with the status quo, what's your best guess about the power Hydro would have to buy next year to meet the peak demands?

**Mr Andognini:** If we did nothing in the nuclear program, all I can tell you is, if you look at the decline of performance and the increase in cost, you've got the curves going in the wrong direction. I honestly believe that if we were allowed to continue operation the way we are now, it would be just a matter of time before the province would shut it down because of increased cost or the regulator would have shut it down for lack of performance.

**Mrs Johns:** So when people are comparing this \$5 billion to \$8 billion versus the \$1.6 billion that you recommended, some of that \$5 billion to \$8 billion, additional money for alternative fuel purchases, would have to be spent anyway because our system is declining or failing.

**Mr Andognini:** That's a good question. Let me answer that by saying that if we had 12 operating units operating at a capacity factor of 86%, we would have in essence not required the Pickering A or the Bruce A units for the generation we have today. I can't tell you how much replacement power. I didn't do those studies. They were done by someone else.

**Mrs Johns:** We got this little chart from our consultants up here that talks about what makes a good electric utility and what does not. It says that the winning utilities are the utilities that offer a lower price.

**Mr Andognini:** That offer a lower price?

**Mrs Johns:** Offer low prices, it says, so that they're able to compete in the market in the US. This is done by the International Energy Group. My question to you is, if you have a staff complement that's now running 19 reactors and you move that staff complement to run 12 reactors, in my little accounting mind that must mean that cost per unit of energy is going to go up.

**Mr Andognini:** Absolutely. Until you increase the capacity factors. When you start to increase the capacity factors and you turn the performance around and you bring those 12 units to 86%, you're going to be making more money than you're making today.

**Mrs Johns:** As long as you spread those people out over all 19 at some point?

**Mr Andognini:** No. You have to remember that at the heavy water facility, I have to have licensed operators there until the hydrogen sulphite has been removed. I'm going to lay the Pickering units up fuelled, which means I have to have operators there anyway. The reason I'm laying them up fuelled is that that will allow me that much more time to get them ready to be back on the line in a shorter time frame. The Bruce A units we're going to defuel, because when we bring the Bruce A units back, we're going to have to replace steam generators and we need the fuel out of the reactor to do it.

**Mrs Johns:** Can you answer this question for me so I can compare this? Between 1997 and 2000 what's the cost per kilowatt-hour — I don't know what number you use — cost per output unit that I could compare to, let's say,

what we're generating in fossil fuel or what we're generating in the US or any of that stuff as a result of this plan?

**Mr Andognini:** I wish you'd asked that question of John Fox, because he has those data and I don't.

**Mrs Johns:** John wasn't really answering my questions.

**Mr Andognini:** I didn't do that analysis. I don't have it, but I —

**Mrs Johns:** Could you get back to me on that?

**Mr Andognini:** I can get it for you.

**Mrs Johns:** I've received a lot of information from people outside about nuclear competitiveness and whether we should be in nuclear. I've got a chart that talks about 700 nuclear plants being closed down in the States over the last period of time in moving forward. First of all, is that number accurate? Has there been —

**Mr Andognini:** Seven hundred?

**Mrs Johns:** Seven hundred being cancelled as they were in planning stages, or else being closed down.

**Mr Andognini:** I don't believe that's true. I would guess maybe you've got a decimal point wrong.

**Mrs Johns:** What would you say the number is?

**Mr Andognini:** I don't know. I'm getting help here, but I would have guessed 60 to 80, or maybe 100 — I don't know — that were cancelled or shut down.

**Mrs Johns:** My numbers could be wrong here. I get lots of stuff here and I'm not in any way understanding nuclear. Is that decrease as a result of any specific issue that relates to the nuclear vision or people's fear of nuclear or the world's changing view of where nuclear should be?

**Mr Andognini:** I don't personally believe it's due to safety of the reactors or any other thing, including disposal of the waste or decommissioning. I think it's purely a cost program.

**Mrs Johns:** So are you telling me that the cost per unit of nuclear is more expensive than it would be for, let's say, cogeneration or something like that?

**Mr Andognini:** I know that the studies were done in Canada that the cost of using the most efficient combined cycle you have today would be about 4.5 mills per kilowatt. We should be able to generate, I believe very easily, power for about 1.752 mills per kilowatt. The cost to return the Pickering units back will be about 2.5 mills per kilowatt. To bring the Bruce back I think it's about 3.5 mills per kilowatt, somewhere in that range. That assumes that the availability of gas is there and that the price of gas doesn't change.

**Mrs Johns:** Is that all capital costs in?

**Mr Andognini:** That's all-inclusive.

1740

**Mrs Johns:** Can you just explain one more thing? I'm probably running out of time. I'm reading your executive summary, and it says as one of your preconditions under table 1.0, "The conditions of assets at end of period is not the same for each case." What does that mean?

**Mr Andognini:** Look at a comparison to two cases, where you have the Pickering A unit and the Bruce A units permanently shut down. They no longer are an asset.

Assume that we can and will turn the performance of these reactors around and bring the Pickering unit and the Bruce units back to performance; you've got a substantial asset instead of a liability.

**The Chair:** Mr Adognini, just a couple of questions to clarify my notes here for the benefit of the committee.

**Mr Conway:** It's called the Chair's prerogative.

**The Chair:** It is indeed, and I thank you for recognizing and supporting that, Mr Conway.

The meeting of August 12, just to clarify that, how long did that meeting last?

**Mr Adognini:** I can't remember specifically the start time, but from somewhere around 9 in the morning to 5 or 5:30 at night.

**The Chair:** As a figure you gave the committee in terms of decommissioning costs from your experience, and I recognize that this is from an experience that may not be in a Canadian context, you said something in the order of perhaps \$500 million. Is that per unit? What does that \$500 million relate to?

**Mr Adognini:** It's for a single pressurized-water reactor, an 800-megawatt unit.

**The Chair:** If you were to take that and now put it into the Canadian context, what might be your —

**Mr Adognini:** I don't know the cost associated with Canada, and I don't think it would be fair to take \$500 million and multiply it by 20.

**The Chair:** By —

**Mr Adognini:** By 20, because there are 20 reactors. I think that is not a fair assessment.

**The Chair:** You have indicated in your comments that you have been involved in at least several instances of recovery plans. Can you explain to the committee the number of units involved in each of those recovery plans and what the cost was?

**Mr Adognini:** No, sir, I can't specifically recall the cost. At Pilgrim Station, it was a one-unit plant, a 700-megawatt boiling-water reactor; at Rancho Seco, it was a 800-megawatt unit, pressurized-water reactor. They were single sites.

**The Chair:** And you don't recall what the cost was for the recovery plan for that?

**Mr Adognini:** I wouldn't trust my memory on that, sir.

**The Chair:** All right. We have time for about one quick question from each caucus, if that's agreeable. The government caucus may want to confer and sort out who the designated hitters would be. I will move, first of all, to the opposition caucus.

**Mr Kwinter:** We talked about this cult. I know you don't like the word, and I don't either, but there is a culture. Mr Farlinger referred to it; he's the one who referred to it as a cult. He certainly referred to this culture, and certainly Dr Kupcis said the same thing. I want to get a reaction from you, because it seemed to me that throughout your report there was a feeling that because of this culture there was no questioning what these people were doing because they were the experts, and that not only would they not go outside to seek advice; they were per-

ceived in the world to be the people you go to get advice, so why would they go and talk to someone else when they have this reputation? Is that a fair evaluation?

**Mr Adognini:** I believe that's probably what happened in Canada, because they were doing well, they were constructing plants, they were operating them well at the beginning. They were a world leader in nuclear, and I believe the other nations turned to Canada to look at that. I believe that is a true statement, sir.

**Mr Laughren:** I don't have a question. I just wish you lots of luck. I hope that when the white paper comes down which is going to guide energy direction in this province, you are able to look at it and express some views on it. We don't know at this point what's going to be in there. I have great difficulty deciding whether I like your recovery plan, because I feel that I'm viewing it in a vacuum. Anyway, good luck.

**Mr Adognini:** When that white paper comes out, if you'd like me to come back to tell you how I personally feel it fits in with the nuclear program, I'll be happy to do that.

**Mr Laughren:** Okay. Thank you.

**Mrs Fisher:** I would just like to say that I don't think, Mr Adognini, there is a single person in the province who disagrees that something needed to be done. I fully acknowledge the task you have before you and certainly respect your efforts. I'm hopeful that this will be the first successful recovery program.

My question comes with regard to the Bruce site, given the significance of the impact at that site. I fully appreciate that there's a \$1-billion retube program already in Pickering. I understand the numbers and I understand, generally speaking, the mechanics of what is required on a recovery basis.

I have to convey my community's concern and their discontent, their strong resentment, if you will, that there was zero consultation done on your recovery plan with regard to the negative impact that will happen there. In fairness, Darlington and Pickering — and I'm not pitting one community against another. I understand the requirement for staffing. But the beneficiary is not Bruce; quite the opposite. There is a strong resentment in the community that in the past, Ontario Hydro, when it was making very significant corporate decisions, would at least include the secondary economic impact review within their decision-making capacities, always taking into consideration the requirement for safe operation. You'll never have an argument from that community that way.

I would ask you, during the course of the next deliberations till whenever, if there was a proposal put forward for reconsideration of the pecking order of recovery, would you give consideration to relooking at that decision?

**Mr Adognini:** I'd give consideration to looking at anything because I am very concerned, and I met with the Bruce community impact team last week and expressed my concern. I'd be happy to look at anything that's cost-effective, but I, solely, cannot make that decision. I would have to take that recommendation to the board.



**The Chair:** On that point about the board, just a final question about that eight-hour meeting: You have been involved in at least several other agencies that have developed recovery plans, is that not true?

**Mr Andognini:** That is true, sir.

**The Chair:** Were you there while the recovery plans were being formulated, or did you come in after the plans were formulated?

**Mr Andognini:** While they were being formulated.

**The Chair:** And you were there when they were presented to their respective boards?

**Mr Andognini:** Yes, sir.

**The Chair:** In your experience, what was the period of time for consideration given by those boards?

**Mr Andognini:** At the Boston Edison situation, the recovery program was initiated. I believe the board — I really don't want to get in trouble, but I think the board deliberated at two meetings that involved the program. At Rancho Seco, we had a number of meetings with the board on the budget, on the program, on the schedule. Every one of the meetings we had at Rancho Seco, since it was a community-owned facility, was a public meeting.

**Mr Conway:** Thank you, Mr Chair. That was very helpful.

**The Chair:** That is my purpose for being here, Mr Conway; it is indeed to help you, sir.

**Mr Conway:** That was very useful final testimony.

**The Chair:** I thank you, Mr Andognini, for being here. I'm conscious of your promise to Ms Fisher and to Ms Johns that you'd be pleased and prepared to come back if necessary, as we get through the white paper or whatever may be presented to this committee later. I appreciate your testimony today. You have been very helpful. We'd be pleased to excuse you now.

Before members of the committee leave, I want to please ask the audience to be in your seat for a moment. I have some business left. If you are going to leave, please go out very quietly. This deals with the week of the 20th and thereafter. I want to report to you that the subcommittee met at noonhour. It went through a series of witnesses that we thought would be appropriate to bring forward. Each caucus was asked to table with the subcommittee any other particular names and groups. We're talking about the umbrella groups right now; we're not talking about the site-specific. You see before you the recommendations. I will seek that the committee now will approve this as the basic envelope of witnesses and allow the Chair and the clerk to proceed with the mechanisms of developing the actual agenda for the week of the 20th.

I remind you that we return on Monday, October 20, at 2 pm. We assume it will be this room. But for the remainder of that week, we'll proceed here in this facility hearing the major witnesses. We will not be proceeding in quite the same way. In other words, we have been giving considerable attention up until now to specific witnesses. Unless the committee directs me otherwise, I would propose to shorten the time frame for each witness so we can collapse some of that activity and make sure we're proceeding through, because we have a very tight time frame

to move into the following weeks both for other witnesses as well as for our site visits and to begin to really revisit and analyse the recovery plan. Some of the witnesses, of course, are part of that, because they will be the financial experts and so forth who will be brought in to help the committee in its deliberations. Are we fairly clear on that? I'd like you to look at this. Is the committee agreeable to this list?

**Mr Galt:** I have no problem with what's on the list, although I did understand items 1 and 2, because of the white paper coming in, would be put more towards the end of the grouping rather than at the beginning. Other than that, it's basically what we discussed.

**The Chair:** That's fine.

**Mr Conway:** I just want to reiterate that I feel, ever more so now after today's testimony, that I'm very keen to have the Ministry of Finance and the Ministry of Energy come over and talk to us about this recovery plan.

**The Chair:** About the costs of the recovery plan?

**Mr Conway:** Yes.

**The Chair:** I see. Well, I need guidance. I've got two points of view.

**Mr Conway:** I think we'll be able to work it out.

**Mr Galt:** I don't think he's disagreeing. It's just that we need them. I agree with that; it's just that if we can put them near the bottom, the white paper may be out and it may —

**The Chair:** It's a matter of timing, and I understand that. I'll try to exercise some due diligence in this regard at least.

**Mr O'Toole:** If I may interject, if we're looking at the cost recovery plan in its standalone quality, that's a separate issue, technically, than the white paper exercise. I really think you want to look at what the appropriate kinds of things are that would happen in the recovery plan and the same questions we were asking today. The white paper might constitute some different need to discuss that later on, but that's quite a different issue.

**The Chair:** That's one of the areas we had covered with the subcommittee and recognized there would be at least a couple of splits in that regard.

**Mr Conway:** The subcommittee has talked repeatedly about the fact that there will be a select number of people we will probably want to recall. From my view, finance and energy are two groups of people we might very well want to have here for two different presentations, one on the whole recovery plan and then on the white paper. I feel very strongly that I certainly want to hear from the Deputy Minister of Finance at the earliest opportunity on this testimony we heard today.

**Mr Galt:** Mr Chair, you're going to have to do some juggling, when people are available. Since we're not subpoenaing specific, you can juggle these around to where they flow in a reasonable sort of —

**The Chair:** We will try to accommodate the business of the committee and the wishes of the members to the best of our ability. I will be in your hands otherwise and/or making unilateral decisions, so we'll move in that regard.

**Mr Conway:** There are some things about Anglicans I've always admired. Their unilateralism, when it's needed, is one of those admirable qualities.

**The Chair:** I thank you so much, Mr Conway.

**Mr Galt:** Do you care for a vote on this, Mr Chair?

**The Chair:** Let's just have a vote on this. Are we agreed that this list we presented to you today is agreeable? Dr Galt has moved it, and it's seconded by Mr Conway. All in favour? Opposed? Carried.

Oh, white smoke. The Board of Internal Economy has approved the budget, so you will not have to return the coffee. We are indeed resolved.

**Mr Conway:** As we say in my church, habemus papam.

**The Chair:** Thank you. Yes, you do say that, don't you?

The committee will stand adjourned until October 20 or at the call of the Chair.

*The committee adjourned at 1755.*



## CONTENTS

Wednesday 8 October 1997

<b>Ontario Hydro</b> .....	H-97
Mr Carl Andognini, chief nuclear officer	

### SELECT COMMITTEE ON ONTARIO HYDRO NUCLEAR AFFAIRS

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**Official Report  
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Monday 20 October 1997

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Lundi 20 octobre 1997

**Select committee on  
Ontario Hydro nuclear affairs**

**Comité spécial des affaires  
nucléaires d'Ontario Hydro**



Chair: Derwyn Shea  
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## LEGISLATIVE ASSEMBLY OF ONTARIO

SELECT COMMITTEE ON  
ONTARIO HYDRO NUCLEAR AFFAIRS

Monday 20 October 1997

## ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

COMITÉ SPÉCIAL DES AFFAIRES  
NUCLÉAIRES D'ONTARIO HYDRO

Lundi 20 octobre 1997

*The committee met at 1709 in room 228, following a closed session.*

**The Chair (Mr Derwyn Shea):** We are prepared to carry on now in public session. I'd like to welcome the deputants, the witnesses for this afternoon and for this evening. For the record, to remind us, this committee has been in session since 2 pm. It is now almost 5:15 pm. It has been in private session on briefings and it is now prepared to return to the witness schedule.

In response to several of the requests of the committee, you will note that the clerk has been moving quickly to try to present some documentation that will be dealt with over the next two or three days. So that will give you an opportunity to read, mark, learn and inwardly digest and be prepared to deal with these matters when they come forward in the next several days.

## ENERGY PROBE

**The Chair:** Having said that, now we turn our attention to the presentation scheduled for 5 pm by Energy Probe, and I welcome Tom Adams and Norm Rubin. If they will, for the purposes of Hansard, identify themselves and whoever else they may wish to bring forward to the witness table, we'll carry on.

**Mr Tom Adams:** Good evening, Mr Chairman and members of the committee. My name is Tom Adams. I'm the executive director of Energy Probe. With me is Norm Rubin, Energy Probe's director of nuclear research.

Energy Probe is a national environmental and consumer advocacy organization specializing in energy issues. In Ontario our foundation represents approximately 20,000 supporters. We have been actively addressing issues related to Ontario Hydro for about 25 years. Since 1982, with the publication of a book by our still-working colleague Larry Solomon called *Breaking up Ontario Hydro's Monopoly*, Energy Probe has been advocating a power system based on the principle of customer choice.

**Mr Doug Galt (Northumberland):** On a point of privilege, Mr Chair: There seems to be a problem with the audio. I'm not sure what's going on.

**The Chair:** I agree with you. It's something with the sound level. It's not your problem, Mr Adams. It's just a problem I think of the volume. We will ask our technician if they can just double-check that.

**Mr Adams:** Do you want me to speak up?

**The Chair:** If you can do that as well. It may be the volume's not picking up. Okay, it's boosted right up, so try again.

**Mr Adams:** For the purposes of our presentation today, we want to briefly summarize what went wrong, and why, with Ontario Hydro's nuclear program. We want to outline the extent of Ontario's nuclear dilemmas and address two questions we consider key to the committee's deliberations: What can we expect to go wrong or right in future, and where does Ontario go from here?

When we conclude our remarks, we will be running through the recommendations that are attached at the back of the presentation package you received just now.

The presentation binder that was supplied to you on Friday contains materials, mostly of an archival nature, designed to illustrate some of the key moments in Ontario Hydro's nuclear history. As the materials document, Energy Probe clearly warned Ontario Hydro about the business risks of nuclear investment in 1981. We attacked the official estimates of nuclear cost as incomplete and inadequate in 1989. From 1989 through 1991 we analysed and published the declining nuclear performance and a mathematical model of that performance. It has since accurately forecast the outcome of the production from the nuclear plants.

In all three cases, our predictions were based on factual evidence that's come true. In all three cases, Ontario Hydro and its political masters continued to increase the province's nuclear risks despite all of this evidence.

**The Chair:** Let me just pause for a second. I want to give you help. We want to make sure we hear. This is very important. Would you just move to the other microphone. Let's see if we can get your dulcet tones coming through. Try that again, please. Just test it out for a moment.

**Mr Adams:** The scope of Ontario's nuclear problems is sweeping and grave. I think this is working better. The health and security of Ontarians and our environment is threatened by the continuing operation of our nuclear plants. Taxpayers and ratepayers are facing probably tens of billions of dollars of costs caused by uneconomic nuclear investments. Electricity reliability in Ontario is now hanging by a thread. To keep the lights on this winter, Ontario Hydro is hoping to restore Bruce units 3 and 4 to partial service, having declared on Friday they're not going to attempt to restart Bruce unit 1. The four-unit Darlington station is now limited to 55% of full power due



to the discovery of a design flaw, and they're hoping to restore that to full power.

If these units are not restored or if other unexpected difficulties arise, we could see a number of negative outcomes for customers. Industrial customers would be cut back first. Following that, Ontario Hydro would make an appeal to customers to cut consumption. If that was not sufficient in balancing supply and demand, they could opt to brown out the province with planned voltage reductions, as they did in 1989, or possibly engage in more drastic measures.

I'll turn the comments on the question of what went wrong, the safety of Ontario's reactors and the role of liability to my colleague Norm Rubin.

**Mr Norm Rubin:** Energy Probe agrees with Ontario Hydro that their nuclear problems can be attributed to bad management. But our analysis is much more fundamental than Ontario Hydro's. They focus on the bad management of reactor operating staff. We think the worst management decisions were the decisions to bet tens of billions of dollars on an experimental, untested and inherently unsafe technology. Those errors were made in the 1970s and early 1980s. They were compounded by Hydro management decisions throughout the 1980s to maximize nuclear production and delay nuclear maintenance. Those decisions successfully deferred Hydro's day of reckoning until Darlington was virtually complete. Hydro thwarted the short-term goals of its critics. Hydro also slashed its own wrists financially and politically in the longer term. The 1980s were a triumph of political gamesmanship and empire-building over wisdom and prudence. Unfortunately, Ontario Hydro management is still playing for a Hydro win rather than an Ontario win.

The creative nuclear accounting that let Hydro pretend it was a provider of low-cost electricity in the 1980s is reaching even more absurd lengths in the late 1990s. As a result, Hydro is planning to run fiscal deficits comparable in size to this government's painful spending cuts. In addition, Hydro is planning to leave our children with environmental liabilities for nuclear cleanup that will cost \$15 billion in today's dollars, according to Ontario Hydro's own estimates. Just as in the 1980s, the goal is to freeze the price of electricity, while the cost of electricity continues to skyrocket. That strategy may or may not work until the next election, but it can't work for long.

More ominously still, Hydro is still applying wishful thinking in nuclear safety. Throughout the IIPA report, despite its rather honest and brutal examination of Hydro's human failings, there is a laboured attempt to convince the reader that the Candu reactor is an inherently safe, forgiving piece of technology. It is not. It's worth remembering that virtually every analysis of real-world technological disasters, from Bhopal to Chernobyl to the Challenger, has found that a root cause of each of those accidents was that the owners overestimated the safety of their technology.

Many Ontario residents now know that a federal law called the Nuclear Liability Act protects Ontario Hydro and all its suppliers from liability for any reactor accident

except the most trivial. Specifically, Hydro's insurers would be held responsible for the first \$75 million of damages. The designers, suppliers and builders would not be responsible for any damages at all. The federal Parliament could appropriate funds for victims, if Parliament chose to do so. As some of you may know, Energy Probe, the city of Toronto and Dr Rosalie Bertell were unsuccessful in striking down this law in the lower court and were unable to proceed to appeal, largely because of Ontario Hydro's energetic courtroom defence of this federal law. Bottom line: If, God forbid, there is a major reactor accident in Ontario, the polluter will definitely not pay.

Meanwhile, as Ontario Hydro's reactors continue to shut down, we are entering a period of instability and high risk, for a number of reasons. I've iterated three: Morale among Hydro's nuclear operators is now at an all-time low, and understandably so; the field of nuclear energy and reactor safety, which used to appeal to some of the best and brightest of technology students when I was in university, before I had these grey hairs, is now correctly seen as a dead-end job; in addition, Hydro can no longer afford its traditional style of gold-plated engineering to solve its nuclear problems, simply because Hydro's customers and competitors can now undercut Hydro's costs and its prices.

We think this situation places an unrealistically difficult burden on the federal Atomic Energy Control Board, an agency historically much closer to and more comfortable with the nuclear industry than the concerned public. In short, we believe it's unrealistic for this committee to expect a safe sunset for nuclear energy in Ontario, especially as long as those who can do the most to protect the people at risk are artificially protected from being responsible for their neighbours' losses.

1720

**Mr Adams:** Before we turn it over to questions, I'd like to just run through the recommendations we've proposed and have attached at the back of the package.

First, we recommend the committee find that the eight reactors at Pickering A and Bruce A should be written off and the units permanently closed.

Second, we urge the committee to investigate all opportunities for financing future nuclear investments outside of the public purse.

Third, we have a series of recommendations on improving financial reporting and the accuracy of Ontario Hydro's reports of expenditures and liabilities.

Fourth, we recommend that Ontario Hydro be broken up, with a view to permitting customers to buy power from producers of their choice and making producers accountable to both customers and investors.

Finally, we recommend that Ontario begin a transition to a regime of full nuclear liability.

With that, I'd like to invite any questions that committee members might have for either of us.

**The Chair:** All right. I'll begin with the Liberal caucus for the questioning today.

**Mr Monte Kwinter (Wilson Heights):** I'm just curious to find out exactly where you are coming from. For example, are you absolutely opposed to nuclear energy of any kind or are you just concerned about the specific technology that's in the Candu and the lack of maintenance and the problems that are concerned with that?

**Mr Rubin:** I don't think anybody on our staff, for example, is religiously or unalterably opposed to the splitting of nuclei. I'm certainly not. I certainly approve of a number of medical uses of nuclear technology.

I guess the answer is the latter. But I do think that the large-scale generation of centralized electricity with the kind of technology we're using today is on its way out, and properly so, and that the more the public as a whole, the investors and the neighbours of this technology know about it, the more quickly it will be phased out.

Whether 50 years from now, 100 years from now, there will be a generation technology, an energy technology that involves nuclear fission, or indeed nuclear fusion, is a good question. I don't have a firm answer on that. I think some of those technologies, some of the future technologies, have been oversold as badly as today's nuclear fission was oversold when I was a kid. Electricity too cheap to meter, safe, environmental etc — all those things that some of us are old enough to remember as the dreams of tomorrow. Well, it's today and it's not true.

**Mr Kwinter:** Have you done a comparison in other jurisdictions that are heavily dependent on nuclear energy as to what their status is and what their safety records are?

**Mr Rubin:** We've certainly seen that the forecasts for future investment, for ongoing investment in nuclear power, which were very aggressive around the world, even 19 years ago when I started working in this field for Energy Probe, those forecasts have vanished and now we're discussing the rate at which we're going to shut reactors down. Except for a few despotic regimes in Asia that are still looking to invest money, we're basically backing out and the debate is over the rate at which we're backing out. We have that international comparison. Ontario is certainly not unique in shutting down reactors that on paper have decades more life left to them.

**Mr Kwinter:** The reason I am asking you these questions is that in your recommendations you suggest, "The committee should urge the government to investigate all opportunities for financing future nuclear investments...." It would seem to me there is a contradiction. On the one hand you're saying, "Get rid of these things," and on the other hand you're saying, "Here's a recommendation of how you should finance future nuclear investments."

**Mr Rubin:** Yes, I understand how we confused you, and we probably confused most of you with that, so let me hasten to clarify that. We are now in a situation where Ontario Hydro is planning a nuclear recovery plan. That plan, in addition to recognizing the costs of shutdowns and replacement power and some other items that are being visited on Ontario Hydro, also envisages the investment of new money, to the tune of roughly \$1.6 billion. That's the money we're addressing in that recommendation.

We would like our provincial income tax form to have a little box where we can checkmark, "No, thank you," so that money will be on somebody else's bill, because I am sure I speak for Tom and myself in saying we don't have investors' confidence that that money is going to be money well-spent and we would like not to be investors. We don't think the taxpayers, your constituents, should be unwilling investors in that nuclear recovery plan.

Fortunately, there seems to be a pool of willing investors, namely, the members of the Power Workers' Union and the society. They have over and over and over, shall we say, out-Hydroed Hydro in their enthusiasm for putting new money into old reactors. We hope this committee could find a way that was both reasonable and legal to put those two loose ends together and let the people with the most enthusiasm invest and stand to benefit if they're right in their enthusiasm.

I would love to see a situation where the Hydro pension plan, for example, doubled its money by making wise investments in nuclear recovery. If they lost their money, then that's also the right answer. But I don't want in, and the taxpayers should get out of this dole and let this industry stand as an investment, because that's what it is. It's a speculative investment. We now know how speculative. It's too late to claim we don't know.

**Mr Floyd Laughren (Nickel Belt):** Welcome to the committee. I wanted to ask you about your recommendation 4, at the end of your presentation: "The government of Ontario should break up Ontario Hydro with a view to permitting customers to buy power from producers of their choice and making power producers accountable to customers and investors." I think I understand the concept, but I don't know how it works, where that fits with the privatization agenda and where it fits with the debt Ontario Hydro now has, in the neighbourhood of \$32 billion, and where it fits with the private sector operating nuclear stations that are of, as you would put, a dubious quality or safety standard. I wonder if you could help me out there. What happens when you break up Ontario Hydro in terms of the generation, the distribution, the retail end of it? Can you expand on that a bit?

**Mr Adams:** We have a number of concerns about the way Ontario Hydro is currently managed. One of them is that the good parts of the operation, the financially successful parts of Ontario Hydro, are subsidizing the rest of it. As a result, the good parts are being driven into the ground.

The problems that were identified in the IIPA report, about the failure to adequately invest and maintain resources and the problems of communication not moving through the corporation appropriately, those problems are not at all restricted to nuclear. They're happening in the other assets as well.

What we've got is a pool of good assets — a transmission system, hydro-electric and transformation resources — that are not in proper repair. They haven't been maintained. We've seen, for example, some hydro-electric stations — they should be the patrimony of Ontario — that have been run into the ground. Ontario Hydro's had a



number of pen stock ruptures. These are the pipes that carry the water down into the turbine generator that have not been appropriately maintained and have ruptured. One of the principles in this unbundling proposal, breaking up the assets of Ontario Hydro, is to prevent this kind of thing from going on.

The whole concept of retail competition in electricity has been demonstrated in Ontario in natural gas, where —

**Mr Laughren:** Excuse me. You're not just talking retail distribution here, though, are you?

**Mr Adams:** No, we're talking about retail competition in the purchase and sale of the commodity itself.

**Mr Laughren:** And generation too.

**Mr Adams:** That's absolutely right. For the commodity of electricity, there are many close analogies. There are electricity jurisdictions elsewhere that have been successful in moving in this direction. The state of Victoria, Australia, for example, is a very exciting example. But the example we have in Ontario of the progress in natural gas deregulation is another good example. Twelve years ago, when we started to deregulate the gas markets, Energy Probe was very active in gas — we've been close observers. What we saw there was an innovation that hadn't been tried and hasn't been tried elsewhere. When the competition was opened up in the retail gas market, it was opened up not just for big industrial consumers of gas but also for small residential customers. The benefits have been very evenly shared.

1730

**Mr Laughren:** But be fair, now. There's a big difference when you're dealing with Hydro, which has this cumulative debt and so forth, and facilities like the nuclear facilities. I don't think it's a fair analogy. But anyway I really want you to deal with that issue of those stranded assets and the debt Ontario Hydro has.

**Mr Adams:** In the natural gas industry, when deregulation was first brought in, there was a major stranded cost problem. It was dealt with by a mechanism called Topgas. It related to the contracts the local distribution utility had with suppliers of gas in Alberta and the transmission utilities that carried the gas here. It was dealt with. It was efficiently managed. It allowed the transition to take place.

One of the principles that guides a lot of our policy recommendations is to not let the past be an impediment to making good decisions in future. We have some past and some historic liabilities that we have to deal with. That's very important and very significant. It's a question of dividing up the cost and who pays what and how much and what the total pie will be.

If we leave Ontario Hydro alone, our assessment is that the liabilities will continue to build. We want to cap the liabilities and deal with them, but deal with them in such a way that allows us to move forward.

**Mr John O'Toole (Durham East):** I haven't had a chance to go through all your material, but I am a little bit familiar with it from the past. I think you'd agree primarily, without being too simplistic, that we do need power. Our whole society is based on having some source of power.

**Mr Adams:** No disagreement.

**Mr O'Toole:** That's establishing that you're not going to just operate under candles. I sort of naturally flow to that. Following it, are you basically opposed to nuclear, without oversimplifying the issue, or is it the Candu technology?

**Mr Adams:** First of all, we're not opposed to electricity. Electricity is nice stuff.

**Mr O'Toole:** We've established that. I'm trying to establish sequentially here that, first, we want power; now I'm asking, are you for or against nuclear? That's kind of easy and straightforward, or is it that simple?

**Mr Adams:** The available nuclear technologies, including the ones that are used in Ontario, we think are not in the public interest.

**Mr O'Toole:** How I'm going to ask my next question is, so you're in favour of fossil, then, of some sort, gas or coal or something?

**Mr Adams:** We think there need to be alternatives.

**Mr Rubin:** There are alternatives.

**Mr O'Toole:** How are we going to provide the 20,000 megawatts or whatever it is we need? How are we going to actually provide it, windmills, pedal-operated turbines?

**Mr Adams:** Right now Ontario Hydro is in court preventing a couple of the alternatives from coming into being, alternatives that are very environmentally responsible and economically attractive, district heating cogeneration stations in both cases. One is located in the city of London and another one is in Ajax. The Ajax facility is interesting because it's fuelled with wood waste; it doesn't use fossil fuels. It uses fossil fuels to some extent, I think as a startup fuel, but its primary fuel is biomass that would otherwise go to a landfill site.

**Mr O'Toole:** So you're not for energy from waste or any of those kind of European strategies, are you?

**Mr Adams:** We think Ontario needs a very diversified mix of energy supplies. We think if we open the market up, the market would come up with a lot of good solutions: industrial cogeneration, combined cycle, gas-fired generation, district heating cogeneration, a certain amount of renewables from waste fuels like landfill gas, for example, or waste wood or biomass.

**Mr O'Toole:** You're for a diversity of supply-side. I want to get down a little bit more to your traditional role. Have your past criticisms of Ontario Hydro been fully recognized by the IIPA report?

**Mr Rubin:** No. As I indicated in my presentation, the IIPA report, while listing most of the known failings of staff and management and some of the cultural problems within the stations and a number of things that are very important to get on the public record, maintains the argument that this is an inherently safe technology. They don't use those words in that order, because I think the authors would realize it's not true if they said those words exactly that way. But the impression is given that this is a technology that's basically as safe as houses, however we really have to have good management when we run it.

I think all you have to do is lean back for a minute and squint and say: "What if these people were running a

marshmallow factory or what if they were running the facility in Ajax that's turning wood waste into electricity and heating homes in the Ajax region at the same time? What if we found beer bottles in the control room of that facility? Would we have to have a big press conference and have everybody show up and make it front-page news?" The answer is no. The reason is obvious: because one is an inherently unsafe technology and the other one doesn't have that problem. This is a technological problem, and IIPA has not acknowledged that and Hydro has not acknowledged it.

**Mr O'Toole:** So you haven't really agreed with the IIPA report because it sort of legitimizes the nuclear side. Whether it's the writer itself, it's more of a HRM problem. How do you think the government should deal with, or for that matter the last several governments should have dealt with the correctness of that decision on handling a stranded asset or whatever you call it? Say there were decisions to make with respect to alternative supplies. How do you propose the distribution of this liability should be managed? The cost-recovery plan is a bad plan, then?

**Mr Rubin:** The cost-recovery plan is not about distributing stranded assets; the nuclear recovery plan is about shaping up the B stations while Hydro makes believe it doesn't own the A stations. We've suggested a couple of amendments to that. One of the amendments is that Hydro in effect make believe it doesn't own the A stations for the rest of Hydro's life. The second part is that the new investment, something approaching \$2 billion by Hydro's reckoning — it might turn out to be more — that money not come from government-guaranteed funds.

If you look at the 1981 exchange I had with Hugh Macaulay, the brighter than average chairman of Ontario Hydro, and you look at his response and how wrong his response was, knowing what we know now, and you ask yourself, "How could such a clever fellow be so stupid on that day?" I believe you would come to the kind of conclusion we came to: He was under incentives to come up with the wrong answer; he was under virtually no incentive to come up with the right answer.

We've suggested the investment community of Ontario and North America be more involved in balancing fear and greed in making investment decisions in technology to generate electricity, because that's one of the things they do well. Government doesn't seem to balance fear and greed very well when buying industries or when making business decisions.

1740

**Mr Sean G. Conway (Renfrew North):** I want to come back to the recovery plan as Hydro has proposed it. Taking into account environmental considerations and financial factors, do you have any particular additional comments to make with respect to the specifics of the non-nuclear part of the recovery plan, as best you understand it today?

**Mr Rubin:** You're talking about the plan for replacement power?

**Mr Conway:** Yes.

**Mr Rubin:** Certainly my response is that we're dealing with monopoly power. This is just the way the utility company in China or in the former Soviet Union would have made these decisions. Hydro has always said there's a choice here between coal and nuclear. They've always been wrong, except in one narrow framework. If you set up a corporation like Ontario Hydro, you will find it gravitates to those two rotten choices; it always has.

The things Hydro is trying to beat off with a stick, the things it's fighting in court, the things it's fighting with special sweetheart deals to its major power consumers that the rest of us can't get, despite the fact that we have a democratically responsible, publicly owned monopoly — I can't get the deals that Suncor and the oil companies and the rest can get. Isn't that ironic? Those things that Hydro is fighting off with those heroic measures are the solution. They are not coal-fired central generating.

**Mr Conway:** The fundamental evil remains, not just nuclear but monopoly of any kind? Because I think there would be —

**Mr Rubin:** I'm not sure it's true in principle, Mr Conway. It is true in the universe we inhabit that the uncountable monopolies, the centralized monopolies in the electricity business around the world choose the nastiest sources of electricity, and the people who are risking their own buck to try to make a buck by generating electricity happen to gravitate towards high-efficient, relatively renewable, nicer technologies. I just sort of woke up to that situation. I'm not sure it's inherently true. There may be parallel universes in which it goes the other way, but we live in this one.

**Mr Conway:** But certainly it is your view that this current and longstanding difficulty, malaise and worse at Ontario Hydro has not been helped by the fact it has been a monopoly, correct, in your view?

**Mr Rubin:** Yes.

**Mr Conway:** What I want to know is, if monopoly is part of the problem, do you have any advice to the committee? Since there is no question that people like yourselves have been substantially vindicated by the recent testimony of people like Mr Farlinger, accepting that we will not see a continuation of Hydro's monopoly on generation, can you give the committee any thought or advice around regulation? There are those who would argue it's not just monopoly, public or private — it doesn't really matter — but it's that this has been a monopoly, in this case a public monopoly, that has been unregulated, unlike the gas sector to which Tom was referring earlier. Do you have any comment, any view about a new regulatory framework for this unfolding electricity sector?

**Mr Rubin:** Let me first address a small part of that, and then I'll let Tom handle the rest. One important part of that is nuclear regulation, by which we usually mean safety, public health and environmental regulation. I have certainly been a long-time critic of the way that activity is carried out and have urged the province and many earlier select committees, for example, to get the province involved in that regulatory vacuum.



In all fairness, the AECB regulatory vacuum isn't quite as vacuous as it used to be on the reactor safety side; it is still pretty vacuous on the routine emission and environmental side. The province continually looks the other way, whether it's tritium in drinking water or whatever. The province loves to say: "That's a federal matter. They know it. It's not our jurisdiction." "Oh, it is our jurisdiction? Oh, well, it's not our expertise. We'll find a way not to deal with it." That part has to be fixed. That's obviously not the whole story on regulation, because there is also market regulation, and we'll let Tom talk about that.

**Mr Adams:** On the market side, in terms of rationalizing Ontario's electricity system along the principles that have, for example, been guiding the gas market, what we have is a very effective, efficient regulatory agency through the Ontario Energy Board that controls the transmission and distribution system, and that model of having open public regulation of the transmission and distribution, which are inescapably monopoly aspects of the electricity business, is an effective model.

What we are recommending for this unbundling of Ontario Hydro is to separate the naturally competitive enterprises and let the market rule, but with the monopoly aspects, the transmission and distribution system, you make them subject to something like the Ontario Energy Board.

**Mr Conway:** Norm has done a very good job at describing from his point of view the problems with the public enterprise that is Ontario Hydro, but there would be those who would argue that if we open up, particularly on the generation side, and have a competitive marketplace, that if we get Bechtel or if we get Hughes Energy or if we get the Acme Private Energy Corp of Nowhere, USA, or France or Britain, we may find that the kind of business practices of Ontario Hydro, big and powerful as they are, may not in fact be the province of Ontario Hydro alone.

What would you have to say to those critics who would argue that the business practices and the behaviours of Ontario Hydro, so articulately and ably described by your colleague a few moments ago, may in fact attach to other big players in the sector, whether they are public or private, and how does that get dealt with by some kind of new regulatory environment?

**Mr Adams:** The key for us is to demonopolize the parts of the enterprise these people might be engaging in. If they're purchasing generating assets, they need to be beholden to their customers, and we think customers will do a pretty good job of —

**Mr Conway:** But how do they get regulated? If you look at the US and Britain, one of the things that is striking about the new environment is that very quickly a couple of major players — it's been a move, by and large, to fewer, bigger players.

**Mr Adams:** I don't accept that suggestion. If you read the financial press, it appears there are all these mergers going on. In fact many have been struck down by US regulators, for example.

**Mr Conway:** The British government had to intervene just a year and a half ago at the cabinet level to stop consolidations that were occurring in that marketplace.

**Mr Adams:** If you take the British electricity market as an example, when they demonopolized their electricity system in 1989, 100% of the market was controlled by three big companies. Now their market share I think is down to under 60% and falling. The competitive players jumped in the first five years to 11% of the market, and since then I think they're at 17% of the market. There are other players in the market as well.

The point is that if you have good rules of operation, if you have an independent system operator and you have efficient regulation in the transmission and distribution system, the kind of market power concerns you are raising can be dealt with by ensuring that the pieces are small enough.

**The Chair:** Mr Laughren.

**Mr Rubin:** Excuse me, Mr Chairman. Can I add just a couple of words to the answer there? Because we didn't talk about environmental regulation, and I don't think any of us wants to suggest for a moment that there isn't a need for regulating, for example, what comes out of smokestacks, what goes into public water bodies. These are things that have to be regulated whether the owner of the facility is public or private.

Right now I certainly see on the nuclear side sweetheart regulation, privileged pollutants coming out of the nuclear generating stations, but if those nuclear generating stations were made private tomorrow, were sold off, given away, whatever, those problems don't go away. Heck no, they're still there. And the problem of regulating acid gas emissions is one that actually needs regulations to be changed. They should have been changed already, because our current regulations really only apply to Ontario Hydro. That's silly. It's not the name of the corporation that determines whether you can acidify a lake or not.

For example, in our submissions to the Macdonald committee, we were quite clear on a number of changes that have to be made to environmental regulation whether or not the system is restructured. Some of them are made easier by restructuring, some of them are made harder, and we went into that in an appendix to our brief.

**The Chair:** That was a good question, Mr Laughren.

**Mr Laughren:** I'm trying to get a picture, the same kind of picture you have in your mind, of energy at the end of the day. I'm wondering, is there any part of Hydro you would not privatize?

**Mr Rubin:** I can give you my answer to that. My answer used to be that there was no advantage to privatizing the transmission grid, that it was a public carrier in the benefit of all and that it was part of the birthright of Ontario etc, and that its role was to be a public clearing house in effect where producers of electricity and purchasers of electricity met.

**1750**

I have since changed that view, and now, partly through dealing with private monopolies a lot more than I used to, namely, the gas monopolies whose regulatory hearings

and quasi-regulatory meetings I attend fairly regularly, I see that privately owned monopoly working at least as well as the publicly owned monopoly in Ontario ever has. The key, of course, is public regulation. Public regulation, combined with private ownership, I think is an extremely potent mechanism for getting the public interest views heard and maintaining leverage over the monopoly.

There is a certain lack of leverage. If we had the Ontario Energy Board telling Ontario Hydro to do A, B, C and D, or select committees — and we've all been involved with select committees telling Hydro to do A, B, C, and D — the key question that's never answered is, or else what? With a private monopoly that's publicly regulated that answer falls into your lap: or else we cut your rate of return next year. It is obvious. It is a sharp instrument. It is ever present. It makes private monopolies pay a lot of attention to the happiness of the regulators.

My current answer is that except for, for example, the political unwillingness of the population of Ontario to part with Niagara Falls — that I believe is a reality; therefore it would be foolish to lead by playing into the hands of PWU ads, because they're right, the public doesn't want to sell Niagara Falls — so let's not sell Niagara Falls, from a public policy point of view, I don't believe there's a part other than the regulatory institution itself that has to be publicly owned.

**Mr Laughren:** That part of your vision I believe I understand. The second part that I don't understand is the role of nuclear at the end of the day. Do you see nuclear continuing to be a supplier of energy in the province, let's say privatized for argument's sake for the moment, and if so, for how long?

**Mr Rubin:** The short answer is nobody knows. I'm on the steering committee of the Campaign for Nuclear Phaseout. The title of that organization makes its goals clear. The sooner the last reactor shuts down, in general the happier I will be. I don't think it's a good technology. I think it's a toxic, inherently hazardous technology. That said, it is conceivable the rules could be set up so that neighbours of nuclear stations are protected, so that environmental regulations are enacted, so Mr Andognini and his pals could slap the Hydroids around the face enough times that they behave in an exemplary, near perfect manner for long enough to combine — I mean, he believes that good management can combine high reliability and economic output with safety, with safe management. He can demonstrate, he and his team, some places where that seems to have been happening for the last few years.

Personally I don't think it's sustainable in the long run. I think the technology will out. I think ultimately you are dealing with trade-offs between safety and economics, but I've been wrong before. I also was willing to bet against the privatization of the nuclear reactors in the UK. It has now happened. They seem to be success stories in combining good management on the bottom line and in the safety indicators. Obviously, if you have to be a neighbour of nuclear reactors, it's better to be a neighbour of well-run nuclear reactors than poorly run nuclear reactors. If they're well-run, they will run for longer before they're

shut down, either by irate neighbours or irate regulators or lack of economic performance.

**Mr Galt:** I would like to follow through with some of the questioning that Mr O'Toole — you were expressing concern about safety. We had a presentation by the Atomic Energy Control Board, a very impressive presentation, and what I'm hearing from you is you either don't have faith in or don't trust the AECB.

**Mr Rubin:** I think that's right. First of all, the AECB, as I indicated in my presentation today, is trying to push water uphill by trying to enforce safety. The AECB is a tiny organization compared to Ontario Hydro. The incentives on Ontario Hydro are intentionally cockeyed. Ontario Hydro labours under a Nuclear Liability Act that says, just in case your constituents — those of you who represent constituents near nuclear generating stations — suffer losses of billions of dollars due to, god forbid, a nuclear reactor accident, that it isn't Ontario Hydro's problem. It's not on their bill. They have fought recently and hard to make sure that cockeyed law stays exactly where it is.

In that crazy environment in which we have forgiven the potential polluter in advance for doing the unthinkable, it is then extremely hard to enforce safety even if you have enough troops and if they're sharp enough and if they're vigilant enough and if they think like critics; in other words, if they're aggressive, if they're loyalty is to public health and safety and not to the industry. I have questions about all of those ifs.

**Mr Galt:** A moment ago you talked about the British system which is of interest and you talked about privatization of nuclear reactors. The man and woman on the street here in Ontario is pretty concerned about privatization of the nuclear reactor. Why do you think this is so great in Britain?

**Mr Rubin:** I think what's happened in Britain, as you probably know, is that Maggie Thatcher, determined to build a bunch of new nuclear reactors, and determined to privatize the electricity system, found out towards the end of 1989 that you couldn't have both of those things, because the private sector would not invest a nickel in existing nuclear reactors, much less new nuclear reactors.

She chose privatization and kept the nuclear reactors in public hands. I thought, as I indicated a moment ago, they would remain in public hands. What has happened since is that the public entity that ran the nuclear reactors in Britain shaped itself up apparently, and whipped itself into shape where, with relatively minor public guarantees to the private owners of nuclear reactors, willing investors could be found. As I said, I was surprised by that, but a number of indicators are up, including their output and including their safety indicators. Tom Adams wants to add a few words to that if he may.

**Mr Galt:** Just quickly, you're saying if there's to be nuclear out there you would prefer it to be private, is that the bottom line?

**Mr Rubin:** One of the reasons why —

**Mr Galt:** With good regulations.



**Mr Rubin:** Again, coming back to what I said to Mr Laughren, I think regulation is much more powerful when whoever is regulated has something to lose. When you're regulating Ontario Hydro, it's like regulating the government. It's not exactly clear what you threaten them with. With a private entity it's crystal clear.

**Mr Adams:** I don't want to leave you with the impression we are advocates of the British system. Keep in mind that when they sold the nuclear plants in the UK, they sold eight stations. The price they obtained was equal to about half of the cost of construction of the last of the eight stations. It's like building eight houses as a developer and selling them for the price of half of the cost of construction of your last unit. The value of these assets as represented by market prices just shows an incredible, incredible loss to the public purse. So that's nothing for the British public to be at all proud of. I just wanted to complete your perspective on our views of the UK system.

**Mr Galt:** You talked in your last recommendation, I think it's recommendation 5, you don't exactly say privatization; you talk about breaking up and it's very suggestive. We're sitting here with this stranded debt and that's got to go some place. If that was to happen according to your recommendation, what would you propose be done with this stranded debt?

**Mr Adams:** We think the stranded debt ought to be divided. Part of it becomes the liability of taxpayers and part of it becomes the liability of future electricity customers.

**Mr Galt:** For what reasons?

**Mr Adams:** Well, for a couple of reasons. The primary reason why taxpayers ought to take a portion of this burden is that when Ontario Hydro was borrowing money, we the taxpayers of Ontario co-signed the cheques. So we really, from a legal point of view, have acquired a liability there. Ontario should be good to stand behind its name. We should not walk away from our obligations. That's an unsavoury prospect, to have taxpayers bail out Ontario Hydro, but I think legally that's part of the answer. The reason electricity customers ought to pay is related often to history.

One of the groups you'll probably hear from will be the Association of Major Power Consumers in Ontario and the Municipal Electric Association. Both of those organizations were vociferous advocates for nuclear expansion. Up until very recently they were proposing Darlington B and C and D. Some of the key customer groups are really part of the problem here, so I think it's appropriate that electricity customers share a portion of the burden.

In allocating costs to electricity customers, one of the things we want to do is ensure we do it in such a way that cost recovery, those surcharges on the bills, interferes as little as possible with the decisions that customers make, or that other energy producers might make. What we're proposing is something like a transmission charge or a hook-up charge. It's a cost associated with the privilege of being connected to the grid. That's unavoidable by customers who self-generate and customers who take all their requirements from the grid.

**The Chair:** Thank you very much committee. We have gone past the time. Mr Adams, Mr Rubin, thank you very much for appearing before the select committee. I appreciate your time and your interest. The committee will now stand adjourned until the hour of 7 pm. I will remind members of the committee that very light refreshments are prepared for you in the dining room. If we'll be back promptly on time, please, our next witness is Maurice Strong, the former chairman of Ontario Hydro.

*The committee recessed from 1801 to 1901.*

#### MAURICE STRONG

**The Chair:** The committee will be in session again, please. We continue with our witnesses, and at this hour I'm very pleased on behalf of the committee to welcome Maurice Strong to the stand. We appreciate you attending the committee and we look forward to your comments and a chance to visit with you for the next hour. We're in your hands.

**Mr Maurice Strong:** I do appreciate this opportunity of making myself available to this important committee, because I believe the issues before you are of very great importance not only to the future of Ontario Hydro but to the future of Ontario. I believe inasmuch as the time is limited, sir, that I could best serve your purposes by addressing the issues on your mind rather than giving you a dissertation, but I'm quite open to any questions. Unlike the times when I have appeared here with my Ontario Hydro hat on, I have not had the benefit of extensive briefing. I will rely on my memory, but I will respond to all of your questions as fully as I can.

**The Chair:** I'll begin the questioning as we work around by caucus. Mr Strong, you remember how the process operates. Let me begin with Mr Laughren.

**Mr Laughren:** Mr Strong, it's the first time I've seen you without a hat on, but I'll take you at your word that you are indeed bareheaded and begin to ask you to recall some things when you were at Ontario Hydro. In the public press you've used some very strong language, as I recall, about the nuclear program at Hydro. I'm wondering if when you were there, you had a sense that the nuclear program was in as much trouble as we seem to think it is today.

**Mr Strong:** Mr Laughren, I did not know all of the particulars that have emerged of course, but we did have a very deep concern. Right from the very beginning I was very concerned that it was very difficult even as chief executive officer to really get a handle on the nuclear. For example, it took me over a year to get reliable figures on the actual cost of our nuclear. We'd always been told it was very cost-efficient and economical, but the way I was told this isn't the way we did our accounting. We did manage to pull those figures out, but that was an indication.

Also, on the issues of operating, we had a structure that did not lend itself to accountability. As you will recall, we made some changes to divide Ontario Hydro into discrete business units, of which of course the largest single one

was indeed Ontario Hydro Nuclear. We put in a senior management person and instituted a process of attempting to ensure that it was operating and functioning well.

I will go into further detail if you wish, but we were very concerned with nuclear. One of my principal priorities was to try and get on top of the nuclear issue in the company.

**Mr Laughren:** I don't want to put words in anybody's mouth in particular, but I think you were regarded in a lot of different circles as a bit of a wizard. Whether you would depict yourself that way or not, I don't know. That's why it's so surprising, I think, for some of us to understand how it was that as CEO at Hydro you were unable to get a handle on all this and remained, in a sense, frustrated by your own people.

**Mr Strong:** Mr Laughren, I am no wizard.

**Mr Laughren:** Those are my words.

**Mr Strong:** I certainly am not an expert on nuclear. But we did take some very real steps, one on the financial side that I have just referred to, but in addition to that we called in experts. We had a team from the Institute of Nuclear Power Operators from the United States, not nearly as extensive an exercise as later came, but nevertheless we did, and in light of that we established procedures to deal with the issues they had flagged, as we did in respect of the Kenneth Hare report, which had been commissioned before I took on my role.

I met with Ken Hare. I was very deeply concerned with the issues he raised, and we established procedures and a change of management that we thought would deal with that issue. When you do that, you have to allow a certain amount of time to see how those things function. At the same time, I was absolutely amazed that after years of dependence on nuclear power, we did not have at the board level a nuclear power oversight committee. We established that during my period of time.

So we took a series of measures, and I think the records of the company will also make it clear that I personally rated nuclear safety — this will show from minutes, I think, and also from communications with staff — as one of our central priorities.

**Mr Laughren:** Did Mr Farlinger strike a responsive chord in you when he referred to the nuclear division as behaving as a cult?

**Mr Strong:** I guess Mr Farlinger would choose perhaps different words than I would, but there's no question there is a cultural issue there. Remember that for years Ontario Hydro Nuclear was in fact a construction and engineering company. It was driven and led by the need to construct new nuclear plants.

One of the things that I looked at in respect of Darlington, for example, was: What alternatives did Ontario Hydro management and board consider before committing themselves to Darlington? Did they examine other possibilities like natural gas? I found to my surprise that they had not. The only alternatives they had considered were how big the plant should be, where it should be located. No suggestion, in the record at least — and I was quite concerned about that because I think it emphasized a point

that emerged in my experience, that the company had been in effect totally taken over by a nuclear culture, largely a construction and engineering-oriented culture.

**Mr Laughren:** It sounds like the current nuclear recovery program that we're dealing with, quite frankly. How much time do we have, Mr Chair?

**The Chair:** I'm doing 10 minutes for the first round, Mr Laughren.

**Mr Laughren:** Thank you.

You made reference, and I didn't quite catch it, to having someone come in and give you some advice on the nuclear division, but it was Carl Andognini, who is an American expert, who actually came in and did, as you know, the Andognini report and so forth. Is there some reason that you didn't do that?

**Mr Strong:** Yes, because we had the reports of the atomic energy agency. We had the reports of the peer review group that I just mentioned from the Institute of Nuclear Power Operators, I believe it's called, and we had extensive reviews of our own and we set up a board committee process. At that point, maybe wrongly in retrospect, it did not appear that we needed any more. We had been given a pretty clear idea of what our problems were and we went to work to solve them. Obviously, the solutions didn't move the situation as far or as fast as we would have liked, as we now see.

1910

**Mr Laughren:** You made reference to the board having a nuclear oversight committee, I think you said, that consisted of board members. Was there support from the bureaucracy within Hydro, the Hydrocrats, as some of my colleagues refer to them, for that oversight committee?

**Mr Strong:** Yes. The oversight committee had access to all of the management and professional technical capabilities of Ontario Hydro Nuclear. They also had a chairman for most of that period, Dr Reynolds, who was a very distinguished nuclear expert. They also had the capacity to consult others if they wished to do so.

**Mr Laughren:** Did they come back to you as an oversight committee and express their frustration at not being able to — was that not the seed of your problem at that point?

**Mr Strong:** Well, there were a number of concerns and frustrations indicated by various members along the way, including me. The committee was a very active committee, a very concerned and demanding committee. It was by no means a passive or ritualistic committee.

**Mr Laughren:** When you were engaging in the part of the downsizing which I guess was linked to the freeze on rates as well as the freeze on nuclear development, were you under the same impression — and here I must confess that I was under the impression when that happened that the reduction in staff would be because there was going to be no more nuclear development. Therefore, basically the construction wing of Hydro would not be required — I exaggerate a bit, but would not be required — and that's where the reduction in staffing would come from, not from the nuclear division, which perhaps needed the staff that



was there. Were you under that kind of impression, or did you know better?

**Mr Strong:** Obviously, the bulk of the separations in that area were in engineering and construction, and we actually abolished that as a separate unit. However, we didn't abolish that capability totally. We reduced it significantly and abolished it as a separate entity.

I think the records of the company will show that I was insistent that our reductions in personnel and costs would not compromise nuclear safety. I believe the minutes of the board will even show, or the committee at least, that I insisted that any such case should be brought to my attention. If there was any attempt to have cost-cutting or personnel-cutting compromise nuclear safety, it should be brought to my attention.

**Mrs Barbara Fisher (Bruce):** Good evening. I'd like to follow a little bit along the lines of where Mr Laughren left off and then come into the technical changes that were needed that didn't happen, and maybe why.

I would like to focus a little bit on the staffing issue. I assume you know something of the IIPA or have read it, the Andognini report?

**Mr Strong:** Yes, of course. I'm not used to hearing it by those initials, because I live in New York these days.

**Mrs Fisher:** It's a long name and we just try and abbreviate it and keep going.

I guess some of the focus of my questioning is going to go around the staffing issue. I see the IIPA report as a very significant review of the human resources problem. It doesn't get into a lot of the technical inadequacies in terms of the structure and that type of thing; that comes up in other reports that we'll address in a minute.

I know you were there when a large number of the staff were bought out, is how I'll put it, with this package that allowed people to leave. As you know, I am from the Bruce, and I recall the effect that had on the community. I would say that at that date, that time and space, if you will, that in fact you did give some consideration to the impact that would cause in the community. I congratulate you for that. However, I am a little bit concerned that none of the same consideration has been given to the recovery plan from the IIPA that's before us now, which is very significant.

I would ask you this: Can you remember the dollar value that was required by Ontario Hydro to buy out those numbers of employees who decided to take that package?

**Mr Strong:** I probably should remember that figure but I'm not sure I do. It was —

**Mrs Fisher:** Fifty million?

**Mr Strong:** I think it was more than that, actually. I can't remember the figure, but I do remember that the individual figures averaged, if my memory is correct, around \$170,000 — we were criticized for that — and the payout on those was something like four years.

**Mrs Fisher:** Given the report now before us, do you think maybe there could have been a better strategy put in place in 1993 for 1994 buyouts that would have put us in a better position today in terms of recovery? For example,

maybe they shouldn't have been bought out. Would you agree with that?

**Mr Strong:** No, I wouldn't. It's easy to look back. If you had the luxury of being able to take decisions in light of all the information, I suppose you might have modified them to some degree. But the fundamental purpose of that exercise was to flatten out the management organization, to reduce unnecessary personnel, and not in any way to compromise safety. If any of those things occurred, they occurred contrary to our instructions and our purposes.

Obviously, we didn't solve the problem. Remember, this problem built up over many, many years. The problem of converting a nuclear company primarily concentrating on development and construction of new nuclear facilities into one that was stable and concentrating on operations — the operations people earlier on were more or less at the second tier. That doesn't happen overnight.

**Mrs Fisher:** What I just heard you say was to flatten out the management numbers or whatever the word was.

**Mr Strong:** At the management level.

**Mrs Fisher:** Yes. I guess that meant to make sure there was an application of adequate hands on the floor or in the shop to make sure that safe operation was maintained. Can you tell me that that happened? I hear that's not exactly how the downsizing happened at all.

**Mr Strong:** I was assured that was happening. It was one of our primary concerns. Again, I think the records of the company will demonstrate that we — at least I thought we were taking every possible step to ensure that would happen.

**Mrs Fisher:** Let me describe how I see it and maybe then we can just say, "Would you agree or disagree with that?"

When I look at it today — and I can only look at my location in terms of eight of the 20 units, but I'm not unaware of the other ones of Mr O'Toole's riding where we have Darlington and Pickering affected — I would say that perhaps it wasn't done strategically at all. It was, "Whoever wants to take it, take it." It tended to be, how I recognize the buying out, that the most senior who weren't really going to be impacted that significantly on retirement took it — those were the high-priced buyouts, if you will, high price in terms of dollars — and those who were more afraid of never being there, those people who had come in that Ontario Hydro had invested hundreds of millions of dollars in in training hours, in the zero to what turned out to be eight-year capacity — not just three and four years as they thought in the beginning of the announcement, but it turns out to be eight.

I would say that perhaps there was no strategy put in place on that buyout. In fact, the IIPA report today reflects exactly on what should have been anticipated, instead of having to look back now in history and finding the mistake. That's how I see it. Would you agree with that scenario?

**Mr Strong:** I couldn't put it like you do. You're obviously very familiar with these things. I wouldn't put it exactly as you did by any means. It was true that because of the union requirements, we had to have the buyout be

available equitably to people, but we at the same time had a program of trying to take special measures to ensure that people who shouldn't be lost didn't leave.

**Mrs Fisher:** But we did. If I recall, at the very next licensing hearings that I attended on behalf of the community at that time, the chair of the AECB board of directors, Dr Bishop, indicated — I think it was to you as a chair at the time, through your staff — that we were putting that licence at risk because we were diminishing the numbers in each of the trades that required licensed numbers of people per trade. I would say that decision was made, I'm sorry to say, between 1992 and 1995.

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Let me ask you this question: If that's a fact, as we've said to Mr Farlinger and Mr Fox and Mr Andognini — those who were here last week — we've already paid the price. The mistake is a mistake. If we accept the fact that a mistake is a mistake — and there's no sense, in all due respect, hiding behind it. Instead, admit it's a mistake. If the human resource problem is a problem, why do we not go back out right now and buy made-in-Ontario Hydro workers who would still want to be there?

If that was the case, would you not agree — the policy was put in place when you were there that a bought-out Hydro worker couldn't return to the workforce. If you were there today as the chair of Ontario Hydro and you knew that the human resource problem was one of the significant, stymieing factors in progress for the continued operation of the nuclear program, would you change your mind today on that policy and say that if we can find those trained workers who we've invested in — could you bring them back and put them back to work?

**Mr Strong:** I would apply the same concern that I had at the time, but I would apply it with a lot more knowledge. If the condition prevailed today where the problem was human resources — and I think the report makes a compelling case for that; I certainly can see that — then I would do everything that we had to do to change —

**Mrs Fisher:** So you would reconsider it?

**Mr Strong:** Obviously, yes. We all learn from experience.

**Mrs Fisher:** I don't know where I'm at in time, but I have one more question that I'd like to get at, and it has to do with the technical problems. As you know, I try to do my homework and be familiar with those as well. I think you know that I have done that in the past.

There have been growing technical problems on site even when you were there as they related to pressure tube problems — at least the initiation of recognition of that — and also of course the nuclear reactor retube requirement.

Are you aware that in fact some private sector investors — earlier today somebody suggested it would only be in the interests of the Power Workers' Union and the society's pension plans to look at this — were looking to put money in an equity position into a retube of the Bruce A site?

**Mr Strong:** I don't recall any specific proposals of a kind that one could actually examine and evaluate, but I recall hearing about that possibility.

**The Chair:** Thank you very much. Mr Conway.

**Mr Conway:** Mr Strong, good to have you at the committee. I want to follow up on some of the earlier questioning. I was struck, like a lot of people in Ontario, back in the summer, the weekend of August 16 and 17, where you gave quite a fulsome, some might say startling, interview to the Black press, as it's sometimes known, the Southam chain. I'm just going to quote from the Ottawa Citizen and/or the Kitchener-Waterloo Record. The story ran across the system. You're responding to the release of the so-called Andognini report and Hydro's response.

You basically said that you were really upset to hear some of this. "These people were obviously sincere in trying to protect this precious nuclear flame of Ontario's, but even with that, I cannot concede that it was right to withhold information from the board. This even borders on being, well, even criminal. It's very serious." That certainly captured headlines everywhere, and it certainly captured my attention.

I wanted to come back with that as a backdrop, because the impression — more than the impression — left by your article, your interview with the Southam press in August of this summer, was that there was a lot going on about the safety and the operating standards at these nuclear power reactors that neither you nor your board knew a great deal about. I have some problems with that now.

Not that I expect the board or the chair to know all of the details, but about 10 days ago Dr Agnes Bishop came to this committee, the chairperson of the federal regulator. Dr Bishop left with us a very interesting set of documents covering the federal regulation of Ontario Hydro Nuclear assets from the period of about 1986 through to 1996-97. There is throughout this a consistent pattern of high-level concern from the regulator to the highest people — the board chair, the presidents at Ontario Hydro — about these very matters.

I will draw to your attention that on November 4, 1991, according to these documents, we have a meeting of the then-chair of Ontario Hydro, Mr Eliesen, senior nuclear power people from Ontario Hydro, including Mr Elgin Horton, well known to you, I'm sure, and federal regulators. In this meeting of November 4, 1991, Mr Horton confesses to the federal regulator that he and his colleagues at Ontario Hydro Nuclear — this is in the presence of the then chair — are embarrassed and humiliated about their ongoing difficulties in dealing with the problems — serious problems, apparently — at Ontario Hydro Nuclear. That's November 4, 1991.

On October 14, 1992, we have the president of the Atomic Energy Control Board, René Lévesque, writing to Mr Eliesen, your predecessor, where for the first but not the last time the federal regulator is expressing a concern about cuts to staff, as the previous member was addressing, and the impact of those cuts on the operating capacity of Ontario Hydro Nuclear.

These are but two of several references in this documentation that involve the senior leadership at the federal regulator and very senior people at Ontario Hydro: former chairs, head of nuclear power operations. It is impossible



for me to believe that during the time of your chairmanship these kinds of concerns were not brought to your attention.

**Mr Strong:** Well, indeed, Mr Conway, they were brought to my attention. I don't recall all the details, but one of the things I did first was to read all of these and try to bring myself up to speed. It was very clear that we were not exercising the degree of control. That is one of the reasons why on my initiative we created a nuclear oversight committee, and it is one of the reasons why we created an accountable unit in nuclear. It was one of the reasons why we installed new management and a new structure. All of these things were designed to deal with these problems.

**Mr Conway:** I accept that, obviously, but what concerns me now, as I look at what documentation this committee has, Mr Strong, is that your intentions were obviously good, but the reality is — and particularly in areas like the reduction in personnel that was aggressively pursued, for a lot of good reasons, under your leadership — we have at the outset the regulator expressing very real concerns about what this would do, now vindicated by what we've heard in some of the testimony before this committee. What seems incredible to me is that, given the federal regulator's concern about the impact of staff reductions, about the impact of deferred maintenance, no one reported back to you by 1994 and 1995 that this program that you were pursuing was in fact undermining the very recovery that you and everybody wanted.

**Mr Strong:** No, it was not that we just sat back and waited for those things to arise. We had frequent meetings. I insisted that every single issue that was brought up by the regulators or by the peer review committee be addressed. Now, in retrospect, it is clear that they weren't fully addressed. That is so, and I'm very disappointed in that, but the fact is that when you're making significant changes in a corporation, you've got to give the processes you put in place — you've got to give some credibility to the information you're getting back. If I were to wander around forever in a nuclear plant I wouldn't be able to understand what was wrong.

**Mr Conway:** I understand that, but are you telling this committee, Mr Strong, that given, for example, what Elgin Horton said in that November 4, 1991, meeting, neither he nor any of his successors during your term as chair of Ontario Hydro ever came back to you and said, "Maurice, we are cutting too deeply into the operational capacity of the nuclear power division"?

**Mr Strong:** Some of that did arise, and as I indicated before, Mr Conway, that was my concern too. That is why you will see in the records of Ontario Hydro that I insisted that our cuts would not — I believe, if I recall rightly, you will even see in the board of directors' or at least the committee's minutes that the cuts would not compromise. Now, I have not got the personal capacity to determine whether that is being observed or not. I specifically asked on one occasion, and I believe the record will show that, that any such instances be referred to me so I could deal with them.

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**Mr Conway:** But the reality is that over the course of that four-year period of 1992 to 1996, culminating in December 1996, where the federal regulator very nearly shut down Pickering GS because it was so concerned about the slide in operational standards at that power plant, nobody ever came back to you at the senior level and said, "This problem is bad and getting worse, and your plan for recovery is, rather than helping it, undermining it"?

**Mr Strong:** No, not the latter, because it's true that the Pickering incident, like everything else that happened, occasioned a further examination of what we could do to improve things. It was clear that we had not gone all the way, by any means. But remember, the nuclear had really run without much control or accountability, except from within the nuclear itself, until that period. It took some time to establish the systems of control and accountability, and some further time to see whether they could possibly work. They did begin to work, but obviously in the three years that I was there we did do some things which I'm amazed were not done previously.

**Mr Conway:** I accept that.

**Mr Strong:** We started the process; obviously we didn't complete it.

**Mr Conway:** But if one looks at the documentary evidence that has been presented to this committee, it's hard not to conclude that throughout the late 1980s and certainly through the 1990s two problems were really beginning to undermine the operating record and the operating safety of the nuclear power division at Ontario Hydro. One was too many of the wrong people leaving the division and not being replaced. Second, very important maintenance was being deferred while the utility was pushing productivity to the absolute greatest extent possible, thereby producing very attractive revenue numbers, particularly in 1994 and 1995.

It just seems now that when I look at all this material — because one of the mandates of this committee is, what went wrong? — it's very clear from the documents I have that senior people were raising concerns about deferred maintenance and manpower. I just find it hard to accept that the president and the CEO and the chair were up on the 19th floor not being made aware of this.

**Mr Strong:** Mr Conway, that is not a correct analysis. We were not aware of every particular, that is true, but we certainly were aware of the need for improvement. One of the principal preoccupations of the people on our floor was in fact to try and ensure that those problems were dealt with. You'll see, if you examine the record, that this was a primary preoccupation.

**Mr Conway:** I think a primary preoccupation would be once the president of the Atomic Energy Control Board says, in late 1992 and throughout much of 1993 and 1994, "We are really concerned about these staff cuts. The wrong people are leaving and they're leaving in far greater numbers than is acceptable." I would like to think that information is going right back up to you —

**Mr Strong:** Of course it is.

**Mr Conway:** — and there is a specific action plan to stop the haemorrhaging.

**Mr Strong:** And so there was.

**The Chair:** We'll start the next round. Just before we do, a question that flows out of the questioning of Mr Conway and several others: Mr Strong, what measures did you instruct staff to put into place to measure the impact and/or effectiveness of the cuts? What were the benchmarks?

**Mr Strong:** I cannot recall the specific technical benchmarks, but I established a clear policy, which was that our cuts must not compromise nuclear safety.

**The Chair:** Having said that — and you've indicated to the committee that there may be some suspicion about the efficacy of the information coming forward to the board — if that's the case, what steps did you take to put into place for the board approval mechanisms and monitoring mechanisms to be assured that your actions were being followed and that they were not harmful to Ontario Hydro?

**Mr Strong:** We undertook some changes in management, changes in the demands as to what information had to flow up to us and to the nuclear oversight committee once we established that. In every case where we received a report from the Atomic Energy Control Board or from the peer group review that I mentioned, we reviewed that in depth, both at the senior management level and then at the board committee level. We undertook a program of measures which we believed would resolve the issues. We knew they wouldn't resolve them instantly. You don't solve problems like that instantly, but I believe the records will be very clear to show that we undertook very explicit measures, and not only that, but we oversaw them. Having said that, it's very clear from what has happened since that they still were not sufficient.

**The Chair:** Did you use a third party to validate?

**Mr Strong:** In a sense, a lot of this comes from third parties, because the Atomic Energy Control Board is itself a third party.

**The Chair:** The only other question I'd ask is, in your sense, is the board of Ontario Hydro capable of managing Ontario Hydro?

**Mr Strong:** The board as a board has the responsibility for management, but that responsibility is exercised primarily by selecting, in conjunction with the government, the chief executive officer and overseeing the management functions that chief executive officer exercises. No committee can actually do the management, but the board is responsible for the management.

**Mr Laughren:** I'll just follow up very briefly on that, because I have a couple of other questions I want to ask. There's a long history of Ontario Hydro and its relationship with government, regardless of political stripe. I think a lot of politicians have basically thrown up their hands and said, "Ontario Hydro is a government unto itself and they'll do as they will." Following up on the Chair's question, I'm wondering to what extent is Ontario Hydro, I think the largest corporation in Canada in terms of major assets, manageable by a board of directors that's all part-

time, meets once a month, probably gets snowed under the week before each board of directors meeting with information, a lot of which they probably can't comprehend? If I was on that board, I'd be in that position. If that's true, if I'm at least on the fringes of reality here, how do you resolve that? How do you change that?

**Mr Strong:** I don't think any board can exercise executive management. The board has to put the management in place, it has to give it direction, it has to hold it accountable, but it cannot substitute for the executive management. It is true that virtually all boards of directors are part-time people who bring their wisdom, their experience to the table. It's important to have a mix of the right kinds of experience, and that has varied from time to time at Ontario Hydro, but basically I think we've had a good board. Certainly, when I was there, I felt for the most part our board was a very good and well-balanced board, especially when we rounded it out during the latter stages with some business people etc. The board issue is an important one, but the really important issue is the executive management.

May I say, Mr Chairman — this is a side comment — I've left Ontario Hydro, but I'm still an Ontarian and I'm still deeply committed to Ontario and to Ontario Hydro. I very much hope your committee properly looks into the past, but frankly, the fundamental issue that has concerned me all the way through is the future of Ontario Hydro and our vulnerability. This has illustrated that vulnerability. I've been trying to get attention to the question of how vulnerable Ontario Hydro is from a future point of view. I think that vulnerability grows as we defer action on the fundamental issues. What kind of energy mix are we going to have? Are we going to out of this experience suddenly slide into a commitment to a new generation of nuclear, refurbishing old plants? Frankly, I don't have the answers, but I hope this committee will address this fundamental issue.

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**Mr Laughren:** I'm glad you raised that because I'm wondering whether or not you've had an opportunity to have at least a passing glance at the recovery plan put before the Hydro board on August 12 and approved.

**Mr Strong:** I have, sir.

**Mr Laughren:** Do you think that's a reasonable recovery plan?

**Mr Strong:** I'm very impressed with their analysis of the issues. Obviously this is a very experienced group. They addressed the nuclear issue only. They did not address the larger issue of, what alternatives does Ontario Hydro have and does Ontario have and to what extent should those alternatives be examined before making a whole new generation of commitments of billions of dollars to nuclear?

**Mr Laughren:** I've got to get this off my chest.

**The Chair:** I'd be disappointed if you didn't.

**Mr Laughren:** The day before the recovery plan was presented to Ontario Hydro, the Minister of Environment and Energy at that time wrote a letter to the board suggesting to them that they examine all the various options



and consider carefully the recovery plan. It's a letter to Mr Farlinger:

"You can appreciate that the government expects all options will be thoroughly evaluated and assessed by the board before decisions on a full recovery strategy are taken. We also anticipate that any future supply alternatives will be consistent with competitive prices and be financially sustainable in an open market."

That's a very direct letter to the chair of Ontario Hydro. That's on August 11. On August 12, this rather complex recovery plan, although it dealt only with nuclear, you're absolutely right, Mr Strong, was dropped in front of the board and they approved it. If I was Norm Sterling, the minister, I would be beside myself with frustration and anger at the board having so summarily dealt with that report. If I hear you correctly — and I don't want to put words in your mouth. You wouldn't allow me to even if I wanted to or tried to — I hear you saying that you think other options should be considered as well and not simply the recovery plan that's been dropped in front of the board by Mr Andognini.

**Mr Strong:** Mr Laughren, you will agree that it would be not feasible or desirable for me to comment on the actions of the current board, because I'm not there.

**Mr Laughren:** I wouldn't agree with that.

**Mr Strong:** But my general position, based on my earlier knowledge, not necessarily on that particular decision, is that the most fundamental issue we face in Ontario is the future of our energy mix. Where are we going to get our future energy supply? Are we going to do it by refurbishing the nuclear or partially refurbishing the nuclear? To me, that is the fundamental question we must face. As some may know, shortly after the current government came into power, I made a speech.

**Mr Conway:** Quite an interesting speech. I have a copy of it in my hands.

**Mr Strong:** Yes, proposing some things that one wouldn't like perhaps, but making it very clear that this province cannot delay, without horrendous risk and cost, on the decisions on the future structure of our electric power industry, the role of Ontario Hydro in it, what kind of an Ontario Hydro it will be, what the basic mix of supply will be. These are fundamental questions. I have been very concerned about the lag in addressing these and I frankly foresee that we're going to pay a heavy cost for that delay.

**Mr Laughren:** Could I ask you a final question? I must be almost out of time. Do you think Hydro can deal with this recovery plan, which is very expensive, while continuing to have a rate freeze?

**Mr Strong:** I do not know enough about the current figures. I cannot give you an analytical answer, but it would seem to me from my previous experience that it will be a very difficult act of financial acrobatics to do that.

**Mrs Helen Johns (Huron):** Good evening, Mr Strong. I have been looking over your history, getting ready for you to come today, and one of the things I noticed was that you said quite openly before you were given the position of chairman that the company was in crisis. I think you've

also said along the line, as I've read this speech you were just talking about, Competition, Customer Choice and Convergence: A New Structure of the Ontario Electricity Industry, which you gave on July 4, 1995, that the status quo was no longer acceptable, that in 1992 the company had no debt, that there were continually problems in the nuclear division.

You were quite outspoken, I believe — and I gather that's one of your traits, to speak the truth — about your need to have change and to move forward. Everybody looks at you as you're coming into this position as quite a change agent who's going to do something to affect Ontario Hydro and move it along forward. That, I believe, is the backdrop. In fact, I have an interesting article that I found in a paper about you being at one point the chief executive officer and the chairman of the board and I see Mr Conway here doing quite a dissertation on how that can't really work effectively because the job is so big. Everybody's thinking that you're going to work wonders at Ontario Hydro.

I guess the questions start for me with a discussion about what went wrong when everybody thought the change was going to come about. I specifically want to talk about nuclear today. I know there are changes in other parts of Ontario Hydro that you would like to see. You have the Atomic Energy Control Board telling you that they have changes that have been outstanding for 10 years. You have all sorts of things happening. How come there was no kind of public information about all the things that were wrong and how come we didn't move to a process where there was information about what was wrong so we could understand where we were at?

**Mr Strong:** I would like to suggest that certainly the public had access to virtually all the information. Sometimes we didn't have it all ourselves, but one of my first tasks — incidentally, I wasn't the only one said Ontario Hydro was in crisis. I was quoted as saying that, but it was generally conceded when I came into the job that it was in crisis. We did undertake a major reconstruction of Ontario Hydro and I think we were pretty transparent in doing that. We gave full information. I was very available to the press and media and to the board. I believe it was transparent. Of course, we didn't tell them things we didn't know. There are some things that have emerged since that we didn't even know at that time, but fundamentally we reconstructed it.

The company did not have accountable business units. It's a huge company. It was run as one huge entity. We broke it down into individual accountable business units and instituted procedures whereby a management and a board of directors could actually determine whether their policies were being carried out. Now that doesn't happen overnight. It doesn't work perfectly overnight. We undertook a debt reduction program. We moved from a \$3.5-billion loss to the largest profit in our history. We cut our staff down to a level where it was something like 30 years ago.

We did that, in my understanding, without compromising safety. We would not compromise safety. Now per-

haps we may have erred here and there in our assessment of that. That's quite possible. We're certainly not free of error, but the process of turning around a big company is not something anyone, wizard or not, can do instantly. We set in motion some very fundamental changes that I believe have significantly improved Hydro.

We also set in motion at the same time a process by which we went around the province discussing with local communities — we called it Hydro 21 — what they thought Hydro should be in the 21st century. We set up a process of examining, with outsiders and insiders, future options for Ontario Hydro, all of which analysis was made available to the government of the time. We offered to make it available to the new government at that time when it was new and they chose to set out on a different course and establish their own commission, which was perfectly within their prerogative to do.

We still do not have a policy, as I see it, on some of the issues that I raised in that speech, that had been raised in the process I've just described to you, where we were trying to fix up the current Ontario Hydro while at the same time trying to develop a profile of analysis on which we could take decisions for the future.

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**Mrs Johns:** Just to recap what I think you said to me right now, are you saying the public, the government of the day, the Premier of the day, the Minister of Energy of the day were all informed about the problems that were inside Hydro at the time?

**Mr Strong:** They were informed to the best of our knowledge. Some of the things that have emerged since are things that I certainly never knew about, I have to say: tritium, the issue of copper emissions and things like that, that evoked the comment I think Mr Conway mentioned. There were particular things we did not know, of course.

**Mrs Johns:** But the things you did know about, you informed the government of the day, the Premier?

**Mr Strong:** Yes. There was the odd thing, I suppose, that was privileged, but very little.

**Mrs Johns:** One of the questions I want to ask you, and then I'll come back to this, is, in some of the discussions I've been having — and we're having the Power Workers here tomorrow. Since there's such a human resource problem that has happened over the course of Ontario Hydro's days, I would like to ask you if there was any kind of government interference in the three years less a month that you were at Ontario Hydro with respect to union contracts and settlements during negotiations?

**Mr Strong:** The answer is no. This is not a partisan comment, but I have to say that the government of the day was very supportive, including during the union negotiations, which were very tough, when the union leaders went over to see the Premier and he sent them back over to us. He eventually got us both in. I have to say there was real interest but not what I would call interference in management processes.

**Mrs Johns:** So you felt you had a free hand to negotiate the union contracts that came about, especially in the nuclear division?

**Mr Strong:** A "free hand" is hardly the way I would describe it.

**Mrs Johns:** How would you describe it?

**Mr Strong:** I would say that I had the management responsibility and was backed up in that, to the extent that I needed backing up, by the board and the government, but not a free hand.

**Mrs Johns:** So the government never at the time said, "You can't let these people go out and strike for fear that we'll damage our assets."

**Mr Strong:** No. They were concerned about these issues but they issued no order to us. We kept them fully informed, as would be normal, but they issued no order that I would consider to be interference. They took an active interest and a deep concern, but they did leave the negotiations to us. There was — what do you call it? — an arbitrator? I think it was called something else.

**Mr Conway:** Facilitator or mediator?

**Mr Strong:** Mediator, that's right; sorry. There wasn't anything that I would call interference with management prerogatives.

**Mrs Johns:** I was somewhat surprised by the comments that you made in the two papers that Mr Conway has already suggested, about it being criminal. I guess this issue has happened over such a long time frame where the taxpayers of Ontario have seen their assets have less of a value; we've seen a \$7-billion write-off over the last four years at Ontario Hydro. I was surprised when you said some of the things you said about the criminal activity, if you will. I believe for a political appointee not to make sure that the public knows that their assets are being disseminated, that there is no value, and that there are serious problems in a publicly held organization is probably the criminal activity that went on during that time frame. Would you like to comment on that?

**Mr Strong:** It doesn't deserve much of a comment, to be perfectly honest.

**Mrs Johns:** Do you agree with it?

**Mr Strong:** No, I do not. You're trying to suggest that the management indulged in criminal activity and I think that is a totally irresponsible statement, if I may say. I am a citizen. I am not under your control at this moment, so as a citizen —

**Mrs Johns:** Do you think political appointees should be telling taxpayers that their assets are being undermined and the value is declining every year?

**Mr Strong:** I didn't say that. That's what you said.

**Mrs Johns:** You wrote off \$7 billion. Well, in three years you probably wrote off about \$5.6 billion.

**Mr Strong:** That's right, that is correct.

**Mrs Johns:** So that is a decline in assets.

**Mr Strong:** No, that is recognizing facts. That is simply recognizing the fact that those assets had lost their value. That's being honest.

**Mrs Johns:** How did they lose their value?

**Mr Strong:** They lost their value over a number of years. I already have mentioned to you, in my earlier comments, that one of the things I undertook was an actual evaluation of where our money had gone and how much of



it had gone into nuclear. The information I got was that we would need to take a \$12-billion write-down of our nuclear. That's not being criminal. Actually, it would have been wrong not to disclose that. I think probably that figure has grown now. The write-down at that stage, we thought the evaluation of our assets — and I think those papers are available — was something like \$15 billion instead of the \$27-billion figure, which represents a write-down of \$12 billion. A lot of money, yes, but it would be wrong not to recognize that write-down if it represents actually what had happened. Those assets were worth a lot less than we had been led to believe they were worth.

When I commented to Mr Conway, I was commenting on a specific statement he quoted where I said, if that happened — “if” — if they had been in fact hiding information affecting human health, suppressing that information — “if” — I didn't make the accusation that they had done it, but if they had done it, that would verge on the criminal. That's what I said. I didn't say all these activities were criminal, and I accuse no one. But if information that is vital to human health and the environment is deliberately withheld, surely by any definition that is certainly wrong. I'm not a lawyer so maybe I shouldn't have used the word “criminal,” but it's certainly wrong.

**Mrs Johns:** You said that you felt there should have been a write-down of \$12 billion on the assets of Ontario Hydro?

**Mr Strong:** I didn't feel that. I had that analysis done and that was the result of the analysis.

**Mrs Johns:** There hasn't been a \$12-billion write-down on Ontario Hydro assets from 1992 through 1995.

**Mr Strong:** No, we have not taken that write-off. That write-off will be required. That is one of the reasons I have tried to stress that we need to confront the whole question of Ontario Hydro's future: its regulatory future, its financial future, its ownership future, the structure of the industry. We have not. We've been talking about it for years. We've got lots of analysis. We have got to address that.

I just hope this committee, in addition to —

**Mrs Johns:** Don't you think it's misleading to the public, if you believe the assets are \$12 billion overwriten, to record profit in some of those years and to allow the corporation to record profit? Don't you think that's a little misleading to the public who are footing the bill?

**Mr Strong:** We made it clear not only that those assets were worth at that time, in accordance with our analysis, \$12 billion less, but we at the same time made the point that that was probably offset by the valuation of hydro. Because hydro, over the years, had been written down and at that particular point in time — I can't speak for the current situation — our estimate was that the write-down in the nuclear would be approximately offset by write-ups in the value of the hydro-electric power.

**Mrs Johns:** I don't think anybody necessarily believes that, given that we all believe there is a stranded asset there right now that's pretty substantial. I think if we asked anybody in this room, they believe there is a

stranded asset being left at Ontario Hydro. Don't you believe there is a stranded asset?

**Mr Strong:** I know what a stranded asset is, but please tell me what you're talking about and I will give you an answer.

**The Chair:** Thank you, Ms Johns. I'm in the hands of the committee. I know there is still some considerable interest in continuing with Mr Strong, if Mr Strong can indulge us. We also have another deputation to hear from, but I would at least offer the opportunity for the committee to make one more go-around if that's of interest. We can do it in either five- or 10-minute segments, your choice. A five-minute segment?

**Mr Conway:** We didn't have our round.

**The Chair:** You're quite right. I precipitated this just a little bit before you came to your last round. You're quite right. Mr Kwinter, you wanted to have a go at it. Let me ask this question, though, before we go beyond that. I'd like to give some alert to the other deputation waiting, as well as to Mr Strong. Is there a sense the committee has one more quick go-round or not? I'm in your hands.

**Mr Laughren:** I have no problem with that, except I have a meeting at 9. That's my only problem.

**Mr Conway:** I'd like to at least have one more round, including the last part of the second round.

**The Chair:** I covenant to let you have one go at it, but the next one would then be a five-minute round.

**Mr Galt:** Sure.

**The Chair:** One more round on that one? All right, fine. We'll come back to that one and then I'll take my 35-minute round and we'll go from there.

## 2000

**Mr Kwinter:** Mr Strong, one of the things we have to do in this committee, besides taking a look at what went wrong, is trying to get a handle on, what is the viability of this recovery plan? One of the things I was really taken with was your comment that until you got to Hydro, top management thought nuclear power was cheap. What did you mean by that?

**Mr Strong:** That compared to other available sources of power for Ontario Hydro, it was the least expensive. It depends a little bit on your assumptions, but that was based upon estimates of real costs which proved not to be correct.

**Mr Kwinter:** So effectively you're saying that nuclear power is not necessarily cheap and in fact in Hydro's case it was quite expensive.

**Mr Strong:** One of the great surprises, even shocks, that I experienced was to find that Ontario Hydro, one of the great corporations of this country, with many distinguished managers and boards of directors before, did not even know what the nuclear facilities were costing. I found that almost inconceivable. And they didn't know what was happening either.

I'm not condemning them, because it happened over a period of time, but we had got into a mode whereby we were spending billions of dollars and we didn't even know what the economics of the assets were. This problem with

Ontario Hydro didn't just start; it's been deeply entrenched for some time.

**Mr Kwinter:** That's a concern I have. We have a situation where on August 12 the board formally receives the IIAP report — they'd had it a week before — but they also at that meeting approved the recovery plan. You're telling me that there is an organization that habitually has been operating on a premise where they didn't know their true costs. From what you indicate, there are billions of dollars that are floating out there that they have no real handle on. Is that a fair evaluation?

**Mr Strong:** No, Mr Kwinter, not quite. I said that was the situation that we found when we came to Ontario Hydro. I don't say that we did everything perfectly. We certainly didn't. There were lots of things that we didn't quite in three years get to or do as well as we might have, but we did basically set out to try and find out the real situation. We did so. We set up mechanisms to deal with it.

Now I think the board of directors does have a good deal more information on which to base those decisions than they had at that time, including the knowledge that the nuclear is certainly not worth what they thought it was. They know that now. Indeed, I would think, without knowing the details, that this latest report and the need for substantial new expenditures will change those economics even further.

I think the information is much better than it was, but what I'm saying is that report — and I'm not an expert on this report — was a report on nuclear. It did not address the issues of alternatives and the economics of those alternatives, the environmental and other impacts of those alternatives, and I believe that must happen. I don't see how you can make decisions on nuclear alone without taking into account the alternatives, including the economics of those alternatives.

**Mr Kwinter:** If I could just return to this issue of the \$15 billion of write-down or potential write-down. In your statement you said that Hydro spent \$15 billion more than the facility was worth. Is that depreciation or did they overspend?

**Mr Strong:** Just to be accurate, what I said, which was the information I got from the analysis I had commissioned, was that the assets at that time were worth \$12 billion less than we had them on our books at. In other words, they were worth \$15 billion; they were on our books at \$27 billion, but — and I don't want to be overly repetitious — overall the corporation could actually absorb that loss because of the undervalued assets that it had, which just happened to roughly correspond to those figures.

**Mr Kwinter:** The reason I ask is that the actual quote that was attributed to you was, "He revealed that the nuclear unit had spent \$15 billion more than what it was worth."

**Mr Strong:** If I was quoted on that, either they quoted me wrongly or I remembered it wrongly at that time.

**Mr Kwinter:** That's why I wanted to get a clarification. I just wanted to make sure that they hadn't gone out and spent \$15 billion more than they had to spend.

**Mr Strong:** No, it was \$12 billion.

**Mr Kwinter:** Oh, it's only \$12 billion.

There was also a report that you had briefed Premier Harris on the problems at Hydro nuclear and that you had suggested that it would take massive amounts of money to refurbish the nuclear facility. Did you have a handle on how much this massive amount of money was going to be?

**Mr Strong:** We had undertaken, as I mentioned earlier, some very intensive analytical studies about future options for Ontario Hydro and they disclosed a series of options and vulnerabilities. We made a presentation, I think it was in May 1995, to the then cabinet. When the government changed I personally met with Premier Harris and told him of my concerns. He was very good about it all. He said that he understood those. He said we'd done a decent job of bringing Ontario Hydro along and made it clear that Ontario Hydro had not been in their program and therefore, while they would certainly pay attention to Ontario Hydro, it wasn't in their program. I offered to brief their cabinet, as we had done the previous cabinet. That offer, for whatever reason, I'm not criticizing it, was not taken up.

**Mr Kwinter:** You haven't answered the question I asked, which was, the indication in the report was that you had mentioned that there was a massive amount of money required to refurbish the nuclear facility. Really what I want to know is, did you have some sort of idea of how much that was?

**Mr Strong:** We presented no absolute estimates, and they would have been changed by now, but the point we made was that waiting for any significant amount of time would increase our vulnerabilities because — we didn't have knowledge of all the details that have since emerged — as the plants were aging, there were going to be some very tough decisions to make and those decisions needed to be accompanied by decisions on the structure of the industry and the other factors that I was mentioning, that they could not readily be made in isolation. My plea was to get these issues on the table.

**Mr Kwinter:** Mr Strong, if you were the chairman of Hydro today and you'd received the Andognini report, what would have been your recommendation to the board?

**Mr Strong:** I would have been impressed with the report, obviously. I can't really give an answer because the dynamics of the situation, all the knowledge of it that I would have had if I were in that chair, I don't have now. Obviously I would have taken it very seriously. In principle, I would probably have done very much like the board did in terms of shutting down those plants that the evidence showed should be shut down. I think my previous comments make it clear that I would not, however, move from that to an automatic assumption that what we must do is restore all the nuclear and go into a whole new generation of commitments to nuclear.



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**The Chair:** We'll do one more round, then, down to the five-minute part.

Just before we begin that round, Mr Strong, the impression that seemed to come forward for me, and I'd like you to feel free to correct it if you would, is that when you took over as chairman — and as has been pointed out, you were at one point both the chairman and the CEO. The impression given, at least to me in my notes, is that at the very best the staff was perhaps not forthcoming. With all the information that you might require or might desire, it has left me with the impression that former chairmen and former boards immediately preceding you carry considerable responsibility for the state of affairs of Ontario Hydro. Would you like to respond to that?

**Mr Strong:** Well, Mr Chairman, it's not really my nature or business to try to point fingers at other people. I can only describe what I found.

**The Chair:** Did I misstate myself? Would that be a reasonable impression?

**Mr Strong:** No. My impression, and I've made it clear, was that I was very surprised to find that the information that I thought in my business career had been fundamental to guiding and managing a corporation at the board level was not available. I didn't say that staff were unwilling to give me that information. Every time I asked for it, I eventually got it. But the way the system was constructed in the accounting system, it was not easy to pull out.

**The Chair:** But Mr Strong, you gave the impression as well to the committee that it was really much like a dentist drilling for oil. You had to keep going back into the tooth again until you finally thought that maybe you had struck pay dirt. That doesn't strike me as being very forthcoming on the part of the staff. You've also left the impression, at least with me, that former chairmen and boards were in exactly the same position, even more so, and allowed that condition to continue. Now, as a chairman, you do have some responsibility surely to at least respond to whether that's a fair image or not.

**Mr Strong:** Well, Mr Chairman, I don't believe that you should expect me to try and point the finger at those who preceded me. I don't know the circumstances under which they worked. All I know is what I found there, and what I found there was a corporation with a system of accountability that did not give the board and senior management the basis on which to make the kind of management decisions that they had to make. Now who was responsible for that, past governments, past CEOs, past boards, I do not know.

**The Chair:** Let me just pick up a final question and we'll go to our last round. Would it be, in your experience, reasonable to place before your board a document that suggests one might spend upwards of \$10 billion to \$12 billion on a recovery plan, never to have seen that information before, and to expect that to be dealt with appropriately during that board meeting? Is that a reasonable thing to get at?

**Mr Strong:** I'm not trying to be reluctant, but I can comment on things I know about. I find it very difficult to comment on things on which I do not actually know what the situation was. I don't know the inner dynamics and I don't like to be pointing a finger. I have my own inner thoughts and concerns, but —

**The Chair:** In your experience as chairman then, were matters of that significance dealt with in that fashion by the board, or were they dealt with previous to coming to the board by subcommittees of board, by senior staff, and by the chairman?

**Mr Strong:** In my experience at Ontario Hydro, they were dealt with at various levels; first of all in the management, then through the committee structure of the board, and then at the board itself.

**The Chair:** Thank you very much. Mr Laughren, we'll start five-minute rounds.

**Mr Laughren:** Mr Strong, my colleagues will correct me if I'm wrong on this, but I think it was Mr Andognini, when he was before the committee, when he was asked what underlay all of the real problems in the nuclear division, if he could go back in time and if he had to point out one thing that was a problem — I think it was Andognini who said this — he said: "You know what it was? It was lack of preventive maintenance."

It really struck me that we've all been reading about problems at nuclear plants for many years. I don't know when the first set of problems ever came up, but it was a long time ago. It really struck me as bizarre that it would be not a design flaw, not rotten management or lazy workers or any of that, or lack of money, but lack of preventive maintenance. I wonder whether that phrase was ever brought to you as a source of the problem in the nuclear division, because as you say, you knew there were problems there.

**Mr Strong:** Maintenance, yes. The term "preventive" is not one we used to any great degree, but maintenance, which is by its nature preventive, means keeping the asset up to safe operating standards. So certainly maintenance and training of people, all of these were issues and they were all issues we addressed. In retrospect, if we had had that report back then with all the information they've disclosed, I am sure we would have improved our performance in nuclear at that time. We did not.

You know, these people came in not just for a few weeks or a few days; they came in for months and they actually lived with the nuclear. It took something like that, and I commend Al Kupcis for commissioning that report because he obviously became aware that the measures we had undertaken together were simply not working satisfactorily or sufficiently. Therefore he took some additional measures to get to the bottom and he did. Yes, if I had had that report, I would have acted on it.

**Mr Laughren:** Either that or resigned.

**Mr Strong:** That's right.

**Mr Laughren:** Mr Kupcis was a very straight-ahead kind of witness. He was very frank and very direct, and when people challenged him on the fact that he was a scapegoat in his resignation, he was very clear that that's

not how he viewed his fate at all, that he was the CEO and therefore did what an honourable CEO would do once that report came out.

I really would like to go back to the recovery plan, because many of us feel, and I won't speak for my colleagues, but I think there's a lot of people who've read the recovery plan and have heard about it and really do question it for the speed with which it was passed through the board. Was it your experience when you were there that something as complex as that and as expensive as that, incredibly expensive, would come to the board and a decision be expected that same meeting?

**Mr Strong:** Well, Mr Laughren, you've heard from before, I've very hesitant — it's not because I'm trying to withhold —

**Mr Laughren:** No, I'm talking about when you were there.

**Mr Strong:** I can't say, because I would have — before it got to the board, I'm sure they went through all kinds of other processes of examination. I can't believe that they would simply get it and act on it like that. I don't want to pronounce on that, because I simply don't know, but any decision of that nature obviously needs very careful, very thorough consideration. Whether it received that, I simply don't know.

**Mr Galt:** Good evening, Mr Strong.

**Mr Strong:** Good evening.

**Mr Galt:** As I read and look over what's been going on with Ontario Hydro and the people of Ontario, I believe we're very fortunate that we have a chairman and a board that's taking the bull by the horns and is going to do something. There's been a thorough investigation and a recommendation's come forward. We have a committee now investigating it.

Looking back at some of your comments, you referred to this as a company in crisis when you came into office, and more recently you talked about it as a nuclear cult — or culture, sorry — according to the press. "Nuclear culture" was the term that was used, very close to what the current chair is using. Obviously problems existed, in your opinion. Just prior to that, 1989, I see where they recommended that 16 new nuclear reactors come on stream, in spite of Darlington coming on at some \$14 billion, when it started out at \$4 billion. Can you make some comments about this culture you were concerned about, this company in crisis?

**Mr Strong:** Yes, I can. In Ontario there had been almost continuing growth, with a few little interruptions, for several decades since the war. There had been a tremendous need for new energy. There had been great concern for where that was coming from. And there was then this commitment to nuclear; you know, atoms for peace. I recall the early days of nuclear when everybody thought it was a great thing. Ontario Hydro gradually became, in effect, primarily a nuclear company, having originally been primarily a hydro company. It made that evolution. In the course of it, it's management became dominated by nuclear people, which is normal because nuclear became it's principal preoccupation, its principal source of supply.

Yes, you're right. I was amazed when I came in that these 16 plants or something like that were projected, and they continuously projected that the experience of the past would continue into the future. That was the culture, that was the mindset.

They weren't the only ones. Ontario Hydro wasn't alone in all of these things. This tended to be a rather general ethos, but it was not a correct one. It was very clear by the time I got in there that these projections of future growth were not going to take place.

**2020**

**Mr Galt:** So you put an end to the 16?

**Mr Strong:** We did, yes. We took them off the —

**Mr Galt:** Took it off the books.

**Mr Strong:** Yes.

**Mr Galt:** What was your term in office? How long were you there?

**Mr Strong:** I was appointed for five years. I took about three years, just a couple of weeks less than three years.

**Mr Galt:** Dr Bishop said there were many recovery plans put forward during your term. How many recovery plans were there?

**Mr Strong:** In my term?

**Mr Galt:** Yes.

**Mr Strong:** We had a number. There wasn't just a whole lot of different ones. There was continuous upgrading. We monitored the situation continuously and as we got new information we tried to improve our program, but I don't think we kept discarding programs and substituting new ones.

**Mr Galt:** But you didn't have a specific one like is going on right now.

**Mr Strong:** Many of the same elements, but not exactly in that form, no.

**Mr Galt:** Of the ones that you did try to implement, what kind of results did you get? What kind of costs were incurred?

**Mr Strong:** We had the periodic reports, which have been referred to, of the Atomic Energy Control Board. We had the peer review that I mentioned. We had a number of internal reviews. We had Kenneth Hare's report, which was commissioned before I came in but the results of which were still current when I came in and I paid a lot of attention to them. In each case we undertook measures to deal with each of the specific concerns that had been raised in those reports and, as we moved along, we reviewed those and reviewed the performance. In reviewing that performance, you have to rely on the signals that come to you through your accountability system.

**Mr Conway:** I want to come back, Mr Strong, because you're proving to be a wizard all right. There's a quicksilver quality to this testimony that I'm getting troubled with. I don't want to talk about anything other than your watch.

**Mr Strong:** Fine.

**Mr Conway:** On your watch, a three-year period, 1992 to 1995, we have a situation where it is very clear that the federal regulator and other people are saying at the highest level that plans that were started before you



got there but accelerated upon your arrival, plans that cut staffing and threatened training and replacement personnel, were having a very real effect on the operating standards at these reactors. The evidence is everywhere.

I find it inconceivable that you, as the chair and for a considerable period of time the president, the CEO, did not hear that and that you did not put in place a specific training plan, for example, because while you were there Darlington was coming to full power. So you would know. There may be lots of little things you didn't know, but you wouldn't have to be very smart to understand that when you're hearing the federal regulator raising these alarm bells, when you've got to be hearing that all kinds of the wrong people are taking the early retirement package and Darlington's coming to full production, you've got a manpower problem. I can't believe that you, Maurice Strong, did not say to your senior executive cadre, "Where's the plan, where are the benchmarks and what specific measures are we putting in place to ensure that something is being done that is going to meet the requirement?"

**Mr Strong:** Mr Conway, I didn't put it in the aggressive way which you just did, but that's exactly a good characterization of what I did do to respond to these things.

**Mr Conway:** But it didn't happen and Andognini was here 10 days ago saying they had to start undoing, three years later, the very things that you apparently, and your agents, continued to do through the entire three-year term in which you were chair.

**Mr Strong:** I don't accept that. I do accept the fact, Mr Conway, that in light of information now available I hope I would have improved my performance, but I spent a lot of my time and a great deal of my attention on exactly these issues. When you've got a corporation with a deep-seated set of traditions, attitudes and values, it takes time and you've got to give some time to see how these things are in fact working. There are no instant cures for these issues.

**Mr Conway:** I understand that and I don't expect miracles, but I look at what evidence we now have and I can't believe that on your watch something as fundamental to the main part of this company, namely, the operating standards at these nuclear power reactors — and, again, it couldn't be clearer. Everybody seems to be saying the same thing: Too many of the wrong people are leaving, there is no training plan, not only to bring replacement people on board but to meet the requirements of Darlington GS at full production. Particularly since the federal regulator from 1989 through to 1996 is ringing that bell ever more loudly, surely you as president and chair are responding in more specific and meaningful ways than appears to be the case.

**Mr Strong:** Well, Mr Conway, you're an expert on these things. You follow them. What I would suggest, and maybe you've already done this, is you look at what we actually did do. Yes, in retrospect, it wasn't enough, but we put in place more measures to ensure the accountability for the performance of nuclear at every level than had

ever existed there before. Now it's turned out it wasn't sufficient.

**Mr Conway:** I don't agree there. I think you did a lot of interesting things and you were quite a remarkable chair of Ontario Hydro — and I don't expect perfection, please understand that. But I don't accept your assessment. It is not at all clear to me that you in fact did those things, because the reality is that by the end of your watch the situation was worse than ever before. We have a regulator really upset, we have a training situation that's gone from good to mediocre to dangerous, so I don't accept your assessment that on that critical account you did a particularly good job, I'm sorry to say.

**Mr Strong:** I'm not saying, Mr Conway, that I did a good enough job. I am saying that I did, I believe, everything I could do with the evidence available to me, the resources available to me and the advice available to me. I think we took very drastic measures to ensure the continued safety of those plants. If you look at the board you will see that I was very explicit that any instance in which the cost reduction and staff reduction programs were going to impinge on safety should be brought directly to my attention so I could deal with it.

**Mr Conway:** Al Kupcis, your colleague, has walked the plank. He's fallen on his sword and taken his measure of responsibility. What should the people of Ontario generally and the ratepayers of Ontario Hydro specifically expect of you in terms of accountability for what happened on your watch?

**Mr Strong:** I think the evidence will have to speak for itself. Ontario Hydro moved into a position where it was capable of dealing with its problems again, where it was financially viable, where there was a restored confidence in it, where we started to rebuild the morale which had suffered very much during this process. It wasn't perfect. I would not contend it was perfect. I'm quite happy to let them make their judgement; I'm not going to make it for them.

**Mr Conway:** Towards the end of your three-year mandate — I find it very interesting because I was reading yesterday your speech on July 4 to the Canadian Electrical Association on the future of Ontario Hydro.

As you're preparing to take your leave at the end of a three-year mandate, if one looks at your key utterances, two things I remember. I remember your talking very directly about a privatization agenda that certainly didn't seem to recommend itself to Mr Wildman, the then Minister of Energy for the Rae government. I remember that.

Secondly, I remember speeches like this one given in July. It's quite an interesting speech, made all kinds of headlines.

But if one looked at Maurice Strong and read Maurice Strong and listened to Maurice Strong in the last half of that last year, you would get the very distinct impression that your primary concern was a fundamental change, a privatization agenda for the provincial utility. You were much more interested — and quite creative about that, I might add — and there seemed to be little or nothing in your major public statements in that last six-month period

that concerned itself with what ultimately became the substance of the Andognini report.

**2030**

**Mr Strong:** I think if you look at some of the statements I made on nuclear explicitly, in that particular speech I was addressing the broad issues of the regulatory, financial and structural issues of Ontario Hydro and the energy industry. That's true. Look, I'm not going to try and suggest that in my three years I did everything right, but I do believe that I broke many years of precedents in which there were deeply entrenched processes in Ontario Hydro which did not permit it to be managed or controlled effectively by management boards or governments. I believe I set up systems of accountability. Al Kucpis's decision to bring in Andognini and his people resulted from a continuation of those processes.

**Mr Conway:** But surely your own testimony, Mr Strong, makes plain, and we come back to where I began, with the Southam interview, that at the end of it all you're having to stand up and confess, "There were a lot of very important things apparently going on on my watch that spoke to the fundamentals of this largely nuclear company about which I wasn't informed, about which I knew little, and about which I obviously could do little." How is that a testament to any kind of brave new world of better accountability and improved management?

**Mr Strong:** All I can say, Mr Conway, is that's true: Those things were at the operating levels and they did not emerge, and you're right that that shows that the measures we took were not sufficient. I have no problem acknowledging that. But I can say that the measures we did undertake have made it possible to get a handle on things, to get an understanding and to be able to control Ontario Hydro to a degree that was never possible before. The fact that we didn't do it all then —

**Mr Conway:** But a reasonable person could conclude that you did that in a sense inadvertently and backhandedly by letting the thing slip to the very edge of the precipice, on which precipice Mr Farlinger stood on August 13 and said: "God, it's run by a cult. It's all out of control. The flat-earth crowd have been right all along." And of course Kucpis fell over the precipice.

**The Chair:** Thank you, Mr Conway. If you want to make a very quick response to that, by all means do, Mr Strong.

**Mr Strong:** Mr Chairman, I'll just thank you for your interest, but let me repeat that I believe the Ontario Hydro that I left at the end of my three years was a much better Ontario Hydro than we started with. But we certainly did not rectify all the accumulated ills of the nuclear area. We are still living with them, and I would submit that the most important thing this committee can do now is actually look at the future issues, the issues that I have tried to highlight here and in the speech that Mr Conway has referred to.

I did not recommend privatization per se. I have always said that privatization was a means, not an end, and only one means, but I did suggest that private capital could make an important contribution to the future of Ontario Hydro.

**The Chair:** Mr Strong, thank you very much for attending the committee. I appreciate your forthrightness and I hope you might be available if the committee chooses to invite you back, that you would be prepared to accept our invitation. I excuse you now from the witness stand. I appreciate very much your being here.

## ONTARIO CLEAN AIR ALLIANCE

**The Chair:** We will turn our attention to the final deputation of the day, and that is the Ontario Clean Air Alliance and Mr Jack Gibbons, who is the chairman. Mr Gibbons, welcome to the committee. I appreciate your indulgence in waiting for us to proceed. We are in your hands, if you will just introduce yourself for the purpose of Hansard and then if you will present your deputation.

**Mr Jack Gibbons:** My name is Jack Gibbons and I'm the chair of the Ontario Clean Air Alliance. I appreciate this opportunity to address you tonight. I trust you have a copy of our written submission. Our members are listed on the front page.

The Ontario Clean Air Alliance was formed this summer in anticipation of the white paper on electricity competition. The reason we were formed was that we wanted to ensure that electricity competition is combined with cleaner air, not increased pollution. We have put out a paper called Electricity Competition and Clean Air which outlines the new environmental policies which will be necessary in a competitive environment to ensure that we can simultaneously enjoy the economic benefits of competition and cleaner air. We would certainly be glad to discuss that paper with you after the white paper is released.

Our submission tonight to you, of course, is our evaluation of Ontario Hydro's nuclear recovery strategy. We have evaluated the strategy according to three criteria. First, is it consistent with existing environmental regulations and commitments? Second, will it exacerbate human health and environmental problems? Third, is it consistent with a least-cost, low-risk strategy to keep the lights on in this province and to protect human health and the environment?

With respect to the first criterion, "Is it consistent with the existing environmental regulations and commitments of Ontario Hydro?" I would like to address that with respect to numerous pollutants.

First of all, mercury: Mercury is one of the most hazardous air toxics associated with coal-fired electricity generation. It causes kidney, liver and brain damage in people. As a result, there have been two recent important agreements to reduce mercury, one between Canada and the United States and the other one between Canada and Ontario. They both call for a 90% reduction in mercury emissions in the Great Lakes basin by the year 2000. Ontario Hydro's preliminary nuclear recovery strategy will increase Ontario Hydro's mercury emissions by 70%, so at first blush, clearly this nuclear strategy is not consistent with these two important agreements which call for a 90% reduction in mercury emissions.



Turning next to nitrogen oxide emissions, which are also a byproduct of coal-fired electricity generation and which are a precursor of urban smog, in 1991, Ontario Hydro promised the Ontario Ministry of the Environment that starting in the year 2000, its nitrogen oxide emissions would not exceed 38 kilotonnes. According to Ontario Hydro's nuclear recovery strategy, there is a very real possibility that in the year 2000 its nitrogen oxide emissions will exceed 38 kilotonnes. But instead of proposing additional measures to reduce their emissions — they haven't come forward with that — they have suggested that Ontario Hydro will purchase nitrogen oxide emission reduction offsets from other corporations.

Their promise to the Ministry of the Environment in 1991 said they would reduce Ontario Hydro's emissions. There was nothing in that agreement about purchasing offsets from other corporations to achieve compliance with the goal of the 38-kilotonne maximum emissions. So with respect to nitrogen oxides, the nuclear recovery strategy also is not consistent with existing promises or agreements with the Ministry of Environment.

Turning next to sulphur dioxide emissions, which are responsible for acid rain which is killing our lakes and forests, Ontario government regulation 355 says that the maximum possible sulphur dioxide emissions per year from Ontario Hydro are 175 kilotonnes. According to Ontario Hydro, with their nuclear recovery strategy there is a very real possibility that in the year 2000 Hydro's sulphur dioxide emissions will exceed 175 kilotonnes. Again, they have not come forward with additional measures to control their emissions, to bring them down to the limit, and again they are suggesting that they will deal with this problem by purchasing sulphur dioxide emission offsets from other corporations or get involved in sulphur dioxide banking instead of meeting their statutory obligation.

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The nuclear recovery strategy is inconsistent with the Ministry of Environment regulations with respect to sulphur dioxide emissions. They say you must keep your emissions below 175 kilotonnes. They do not give the escape clause of buying offsets from other companies in the United States or Canada or engaging in banking.

Turning to greenhouse gas emissions, which are responsible for climate change, in 1995 Ontario Hydro promised the government of Canada that they would stabilize their greenhouse gas emissions at the 1990 level by the year 2000. They very clearly said, "We will not purchase greenhouse gas offsets to meet the stabilization commitment until there is an international treaty with respect to the purchase and sale of greenhouse gas offsets." There is still no international treaty with respect to the purchase and sale of greenhouse gas offsets, but Ontario Hydro is now proposing to use the purchase of greenhouse gas offsets to achieve their stabilization goal. That is contrary to their 1995 agreement. Their nuclear recovery strategy is not consistent with their greenhouse gas commitments either.

I would now like to turn to our second criterion: Will the nuclear recovery strategy exacerbate human health issues? I would like to inform you that there are five toxic emissions that are a byproduct of coal-fired electricity generation stations and which according to the US government are carcinogens. There are absolutely no caps on Ontario Hydro's emissions of these carcinogens. According to the nuclear recovery strategy, Ontario Hydro's carcinogenic emissions will increase by 50% or 60%. That will exacerbate human health problems.

Turning to particulate emissions, which are also a byproduct of coal-fired electricity generation, particulates aggravate respiratory and cardiovascular disease. They also lead to more frequent attacks of asthma in children. There are no caps on Ontario Hydro's total particulate emissions, and according to the nuclear recovery strategy, particulate emissions will increase by 65%.

The third criterion we've used to evaluate this nuclear recovery strategy is, is it a least-cost, low-risk strategy to keep the lights on and to protect human health and the environment?

Mr Andognini, who was here a few weeks ago, I believe, seems to believe it is. He told you that the cost of bringing Pickering A back to service will be 2.5 cents per kilowatt-hour and the cost of bringing Bruce A back to service will be 3.5 cents per kilowatt-hour. However, those estimates ignore at least three important categories of cost. First, they don't include the cost of decommissioning these nuclear reactors; second, they don't include the cost of storing the radioactive nuclear waste which will be created by the continued operation of these reactors; and third, they do not include the financial and human health and environmental costs of continuing to run the coal-fired stations at increased output until the year 2009, when the nuclear units will finally all be brought back into service, according to Hydro's strategy.

Furthermore, as has come up today in Mr Strong's presentation, Ontario Hydro has not given you any analysis of the costs and risks of alternative non-nuclear strategies to keep the lights on and to protect human health and the environment. This is a very serious omission, in my opinion, because there's very good reason to believe there are credible alternatives: energy efficiency to reduce the demand for electricity and natural-gas-fired cogeneration of electricity to give us the increased supply we need. These are very credible alternatives which can keep the lights on and protect public health and the environment. They also may actually have a lower total financial cost and provide lower bills for our customers.

That's our evaluation according to our three criteria.

We have two recommendations for you. First of all, we suggest that you ask Ontario Hydro to come back with an alternative nuclear recovery strategy which is consistent with the existing environmental regulations and commitments, is consistent with protecting human health, and is consistent with Canada's international environmental obligations. Let's have a nuclear recovery strategy that's consistent with all those goals. Let Ontario Hydro cost it out and give you an analysis of the risk of that strategy

versus the risk of their proposed strategy. That's one alternative.

As I've mentioned before and as you know, there are many people who think there shouldn't be a nuclear recovery strategy, period. Other options may be more cost-effective, safer, and better for the environment. So we recommend that you should also ask Ontario Hydro to come back with an alternative non-nuclear strategy to keep the lights on which is also consistent with environmental regulations and commitments, is consistent with public health, and is consistent with Canada's international environmental obligations.

**Mr O'Toole:** Thank you very much, Mr Gibbons, for your presentation. I echo your concern. The concerns of this committee too are for public safety and human health.

I suspect production of energy with regard to whatever mode that's in has byproduct effects. Would you agree that there aren't too many energy sources that don't provide some kind of particulates or effluent? Can you name one that doesn't provide some sort of resultant byproduct that could be considered a problem?

**Mr Gibbons:** Energy efficiency is very clean. Building a more efficient electric air conditioner is a very clean option. That reduces all emissions, reduces demand. Renewable energy options, small-scale renewable options, are very clean. For example, Toronto Hydro is considering building a wind turbine at Ontario Place, and that will be a 100% pollution-free electricity option. Also, natural gas cogeneration, though it is a fossil fuel and it does produce greenhouse gases and nitrogen oxides, is much cleaner than coal.

**Mr O'Toole:** I guess that's the point. We've heard from a couple of presenters, Energy Probe and perhaps even Mr Strong, that we're all looking for a diversity of supply. What's your preferred supply side? Is it nuclear or is it a whole bunch of different options? I know you want to get the demand down; I understand that. I've heard it and I've written it down so I won't forget it. But we've still got to have supply. There is growth. The demand is a function somewhat of the economy, I suppose. What's the preferred supply?

**Mr Gibbons:** The Ontario Clean Air Alliance's goal, why we were formed, was to make sure that when we move into a competitive environment, we won't have a significant increase in pollution. It was our interpretation that in a competitive environment, the significant increase in pollution, if it occurs, will likely come from fossil generation, primarily coal, because coal-fired stations will be operated at a higher capacity in Canada and in the United States. That was our initial concern; that's what we're trying to deal with.

We haven't taken a position, at least as of yet, about what are the appropriate solutions. We haven't got into that kind of microdetail. What we are focusing on is the proper government policies, types of emissions caps for greenhouse gases, for toxics, that would control the emissions. We aren't proposing government-type policies which would micromanage and tell utilities or businesses how to operate, so we haven't addressed those issues

specifically about what the appropriate supply options are. We haven't got into that.

**Mr O'Toole:** The option on the table today is the preservation of the nuclear option, really, wouldn't you say, although the process of getting there and some of the caps, emission regulations that are circumvented, is problematic for you? Do you think it's important to go to the nuclear option? I mean, there isn't a lot of smoke coming out of the stack.

**2050**

I'm trying to find out, if I want a sustainable grid supply of some 10,000 kilowatts or whatever, or some stable base rate, what should that be? It can't be windmills. Those can do some of the load. Is it nuclear you want to use or is it some other —

**Mr Gibbons:** We don't have a position on that yet. What we do want is to impress on you the importance of getting the emissions down, of clean air.

**Mr O'Toole:** I fully understand.

**Mr Gibbons:** What we're trying to say in the submission that we've presented to you today, and there is more detail in the written submission, is that we don't think at the moment that you have enough information to make a rational decision about whether it should be nuclear, whether we should invest in rehabilitating the nuclear units, or whether Ontario should invest primarily in energy efficiency and natural gas cogeneration. I believe that is a credible option that could meet the needs and could keep the lights on if we wanted to go there. The problem is, Ontario Hydro hasn't provided you or us with enough facts, with enough analysis of the costs, the risks, the environmental and health impacts, to analyse those different options.

**Mr O'Toole:** My last question is on that side. Should the government, or any government, consider the cost? I'll give you an example. They are freezing the rates —

**The Chair:** Quickly, Mr O'Toole.

**Mr O'Toole:** One of our positions, of course, is freezing the rates, which could have precipitated some of our discussion today. If you're looking at wind power, the RFPs, what is the basic per-unit cost? Is it double? Is it triple? I hear it's 10 cents a kilowatt.

**Mr Gibbons:** Wind power is definitely more expensive than natural gas cogeneration or energy efficiency.

**Mr O'Toole:** But should the government ignore the cost?

**Mr Gibbons:** No. You have to look at the cost and try to get the least-cost solution, but you have to be concerned about public health and the environment too. Those are also costs, and all have to be in the balance.

**Mr O'Toole:** They all coexist somehow there.

**Mr Gibbons:** But if I could talk about the wind turbine example, that is a proposed initiative of Toronto Hydro where they will provide green power to customers who are willing to pay a premium for it. It will be totally financially self-sustaining. It will only be paid for by the customers who want to pay a premium for green power, because Toronto Hydro recognizes that green power is more expensive. We have done surveys of our customers



which show that a very significant proportion of our customers are willing to pay a premium for cleaner power.

**Mr Conway:** Mr Gibbons, thank you for some very helpful testimony. I take it, in summary, what you're essentially saying to the committee is: "Listen, we've looked at this recovery plan. We think it raises as many questions as it answers, but to the best of our information at the present time, it certainly, by the year 2000 or 2001, is going to put Ontario, if implemented as understood, at some real risk with its domestic and international environmental agreements."

**Mr Gibbons:** Yes.

**Mr Conway:** The talk on the street seems to be that much of the replacement power in the short term is going to be the old two-cent Ohio Valley coal fire. Are you hearing some of that as well?

**Mr Gibbons:** Well, I've certainly heard it's going to be coal. I'm not sure that it's going to be Ohio Valley as opposed to coal that's generated and turned into electricity in Ontario, but you may be right. I don't claim to be up on that.

**Mr Conway:** Coal is a real concern for you?

**Mr Gibbons:** Yes.

**Mr Conway:** It's the least attractive of the options at the present time?

**Mr Gibbons:** It's a very unattractive option.

**Mr Conway:** On the gas options, which would seem to be more attractive, has your group done any work on the impact environmentally of a fairly significant shift across the eastern half of North America, say in the next 10 to 15 years, away from things like nuclear to gas-fired electric? It seems to me, if you listen carefully to what most utilities in eastern Canada and certainly in the eastern half of the United States are saying, they are all saying much the same thing: that a very substantial amount of their next generation will come from some kind of gas-fired electric.

One of the questions I've had for some time and that has obvious appeal for reasons that I think are pretty clear, is, what analysis has been done of the environmental impacts of a very substantial shift to that alternative continent-wide? Have you any observation on that possibility or that impact?

**Mr Gibbons:** I think most people who have done environmental analysis see the shift to natural gas displacing coal, which is a much dirtier fossil fuel in terms of any type of pollutant you can think of naming. Most people think it's very positive from an environmental perspective.

**Mr Conway:** In a province like Ontario, let's say, or some of the New England utilities which have been shifting not just away from coal but away from nuclear to gas-fired electric, has that analysis been done to any great extent as far as you know?

**Mr Gibbons:** All I'm aware of from an environmental perspective is that generally going to gas is much superior to coal or oil. I think, Mr Conway, you're concerned about putting too many of your eggs in one basket. Is that what you're getting at?

**Mr Conway:** No. I guess the point I want to get at, and you make the point very clearly, is that coal is going to be

a real problem, has been a problem, and that this recovery plan that Ontario Hydro has offered certainly is going to bring more coal-fired electrical generation to Ontario than we've had, and that's not a good thing. Let's just leave it at that for the moment.

I guess the other thing I want to ask you about is that it seems pretty obvious from your testimony that the Ministry of the Environment does not appear to have had a lot to say about the crafting of and the contents of this so-called recovery plan that Hydro has developed.

**Mr Gibbons:** Well, I really am not privy to what discussions have gone on.

**Mr Conway:** But judging from the results, it doesn't appear that the Minister of Energy spent a lot of time talking to the Minister of the Environment at the time this plan was being developed and approved.

**Mr Gibbons:** Well, they are the same person, so —

**Mr Laughren:** He does talk to himself.

**Mr Conway:** The question is being put in a somewhat mischievous fashion, but when I read this — it's been a bit of a difficulty because you were working from notes and we have text and they don't quite match up, but there's some pretty alarming stuff in here. It's news to me, and I'm no expert, but the section on carcinogens, for example, is quite serious. I think it would be of real interest for Ontarians to be told that a group as credible as yours is telling us that this recovery plan is going to substantially increase the amount of carcinogens in the environment in this province and there are no caps at all.

**Mr Gibbons:** Yes, it is a very serious problem.

**Mr Conway:** I've nothing further. Again, thank you.

**Mr Laughren:** Thank you, Mr Gibbons, for coming before the committee and giving us a perspective that I think we need to hear, because we get caught up in managing the energy system in the province and there needs to be an organization that says: "Wait a minute. Let's think about the air quality." I appreciate the role you play.

I suspect that what is bothering a lot of us is that the Hydro board looked at the nuclear recovery plan: full stop. That's it, period. The day before they looked at and approved that plan, the Minister of Environment and Energy, Mr Sterling, wrote to the board and asked them to consider other options. They didn't. We're not even sure that letter ever got to the board. We don't know that. So I think your concerns are well founded.

What I want to know is to what extent you have a sense of what choices Hydro has. I know you don't run Ontario Hydro, I appreciate that, and that your job is to monitor clean air. I understand that and I wouldn't try to give you a greater responsibility than that. But many of us, and I'm one of them, are concerned about what happens when you shut down those seven reactors, the three at Bruce and the four at Pickering. What happens in the interim? How quickly can you crank up alternative sources of energy if it's not coal? Do you have a sense of that?

**Mr Gibbons:** First of all, the major new source, if we were to pursue a new one, would be natural gas cogeneration. You could bring that on stream, I believe, in two years.

**Mr Laughren:** Using what?

**Mr Gibbons:** Natural gas, and cogenerate electricity. Toronto Hydro, of which I am a commissioner, would like to cogenerate electricity in the downtown core of Toronto, and I think we could do it in two years if we were given the go-ahead. I think there are lots of other people in this province who would be happy to bring in natural gas cogeneration. It could be done in two years. That would help us keep our emissions down in the year 2000 and it would also be a long-term clean source of energy for us. So that could be done.

What also could be done is the Ministry of Energy could establish stricter energy efficiency standards for new electrical appliances and motors, and they could start doing that right now.

Ontario Hydro could start encouraging fuel switching. A lot of their customers are using electricity for space heating and water heating, and quite frankly, that's not in the customer's interest. Natural gas is a much cheaper source, you get much lower bills, and it's much cleaner. People should be encouraged to switch off electricity for heating and water heating. That's another option that could help.

There are all kinds of things you can do in terms of energy efficiency. There are many energy efficiency investments that can be put in place now that are very cost-effective, will reduce customers' bills, and will reduce emissions. So there are things that can be done. We do have a choice. We don't just have to crank up the coal-fired stations. We can, within two years, get very significant reductions and start phasing out the coal-fired plants, whereas Ontario Hydro wants to run them at a much higher output level for at least five years. With progressive alternative actions we could limit the coal-fired generation, the big increase, to maybe just two years. There are alternatives.

**Mr Laughren:** Just to be anecdotal for a moment, I live close to Sudbury, where the superstack is and the Falconbridge stacks are, and so I know what sulphur dioxide looks like. There it is in the form of a plume which you can clearly identify.

About two weeks ago I was in a high-rise out north-west of the city, in Mississauga. The window was facing downtown Toronto, and I'm telling you, I have never seen the atmosphere as bad in Sudbury as it was over the city of Toronto that day. I've never seen it that bad, and as I say, I'm not using Sudbury to be the benchmark by any stretch of the imagination, but I can see why people like you are saying we've simply got to take a stand on air quality, because it was disgusting. I looked out over the city and I thanked God I didn't live here permanently. I'm glad for the work that you are doing.

**Mr Gibbons:** Thank you.

**The Chair:** We have one minute left.

**Mrs Johns:** I've listened very intently, and I'm sure that all of us are trying to balance being able to turn on our lights versus the environmental issue.

You say that cogeneration can't happen for two years. I actually concur with you on that. I think 18 to 24 months is the time frame that we have to deal with here.

You haven't really given us any alternatives in what to do for that 18 months. I can tell you that as an elected official, I feel very strongly that when a person goes and turns on the lights or a business goes to turn on the lights, there needs to be power there. We're reliant on it. We need to have that there.

Tell us what you would suggest we do for those two years when we seem to be without any alternative if we don't go through with this plan and they actually do close down the seven reactors.

**Mr Gibbons:** On the bottom of page 9 and the top of page 10 of our written submission we deal with the alternatives in broad categories. Again, it's mainly energy efficiency that is the most cost-effective, and new gas-fired cogeneration. Those are the most powerful tools you have.

What I'm saying to you is that I think the onus is really on Ontario Hydro, which has the obligation to serve everyone in this province, to provide electricity. I believe they have an obligation to come to you and give you more than just one option, give you different options, various options, the costs, the risks of the different options, and then let you make an informed decision. You are the people who must make the decisions. This is ultimately a political decision in the finest sense of the word, but you've got to have alternatives so you can make a real choice. That's our bottom-line submission. We're a clean air alliance. We're not people who are supposed to be expert in energy and in running a utility.

**Mrs Johns:** I do agree with you except for the fact that we're at the date where they want to close those down. Maybe it's a decision that should have been happening four or five or 10 or 15 years ago that we're hearing, but we're faced with this dilemma today and people want their power to be on, so there are some decisions that are very difficult to balance, and we'll have to consider what you said. Thank you very much.

**The Chair:** Thank you very much, Mr Gibbons, for your deputation and for attending the committee. We appreciate that very much indeed.

A reminder for the committee, then, that the committee will stand down until 1000 hours tomorrow morning. The subcommittee will meet at 0930 — I'm using metric — and we will meet at that hour. The subcommittee will please meet in this room, and we'll move from there. There are a number of items on the agenda for us tomorrow.

There being no other business before the committee, we are adjourned.

*The committee adjourned at 2104.*



## CONTENTS

Monday 20 October 1997

Energy Probe .....	H-119
Mr Tom Adams	
Mr Norm Rubin	
Mr Maurice Strong.....	H-126
Ontario Clean Air Alliance.....	H-139
Mr Jack Gibbons	

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H-8

H-8

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Tuesday 21 October 1997

# Journal des débats (Hansard)

Mardi 21 octobre 1997

Select committee on  
Ontario Hydro nuclear affairs

Comité spécial des affaires  
nucléaires d'Ontario Hydro



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## LEGISLATIVE ASSEMBLY OF ONTARIO

SELECT COMMITTEE ON  
ONTARIO HYDRO NUCLEAR AFFAIRS

Tuesday 21 October 1997

## ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

COMITÉ SPÉCIAL DES AFFAIRES  
NUCLÉAIRES D'ONTARIO HYDRO

Mardi 21 octobre 1997

*The committee met at 1008 in room 228.*

**The Chair (Mr Derwyn Shea):** The committee will be in session. To report to the members of the committee, the subcommittee has met this morning and has been going over our schedules. There are still a number of pieces of fine-tuning yet to be completed. Generally, please still consider the schedule before you for the next few weeks as the general envelope and be ready for some changes, both in terms of our times, if necessary, and also dependent on what happens in terms of government policy and actions over the next 24 or 48 hours. The Chair will keep you advised as we move through the next number of hours.

## POWER WORKERS' UNION

**The Chair:** Our first witness this morning is John Murphy of the Power Workers' Union. Welcome, Mr Murphy. When you begin, please be good enough to identify yourself for the purposes of Hansard, and your colleagues with you.

For members of the committee, we will continue in the same rotational process as yesterday. We will begin the round this morning with the opposition caucus beginning the questioning. Mr Murphy, we are in your hands.

**Mr John Murphy:** Good morning. My name is John Murphy. I want to thank the committee for the opportunity, on behalf of the Power Workers' Union and the men and women we represent in our union, to make this presentation today.

With me today are Bob Menard, one of our communications officers, and Richard Stephenson, one of our legal advisers.

A copy of our formal presentation has been distributed, and I hope you will find the time in your busy schedule to read it. What I will do now is spend a few minutes giving you an overview of its main points so you can maximize our discussion time. I'm sure you have many questions.

The very first point I want to make is that despite its current problems, the nuclear industry has been good for Ontario, economically and environmentally, for the past 25 years. We in the Power Workers' Union are proud of our contribution to the province, and we want to do our part, and then some, to restore our nuclear program to the prominence it has enjoyed in the past.

We believe the Hydro management plan to lay up seven reactors for three years is a major mistake that Ontario would come to regret. I'll go through all our reasons in a

moment, but first I want to make an offer to this committee concerning the Bruce heavy water plant.

The heavy water plant had a profitable four-year contract to supply heavy water to AECL for its international operations, but the contract is being abandoned because the plant cannot be run economically without steam from one of the Bruce A reactors, which Hydro plans to shut down. Therefore, the fate of the heavy water plan is tied in with the fate of the Bruce A reactors.

The reason this should concern the committee is that Hydro has now left the heavy water plant and assumes it's junk. Without trace heating in the plant, irreparable damage will happen to the pipes and equipment with the first hard frost, which will certainly come before this committee makes its decision on what should happen to Bruce A. Nitrogen blanketing is also necessary to prevent corrosion.

The PWU is offering to provide voluntary labour to carry out the nitrogen blanketing in the heavy water plant as well as funds to help pay for the trace heating necessary to prevent damage to this plant. This offer should be acted on quickly, because if the plant is damaged, a decision of this committee to keep Bruce A in operation might come too late for our billion-dollar heavy water facility.

I also want to mention that the closing of Bruce A will have a negative impact on the Bruce energy park, which also relies on steam from Bruce A.

I now turn to the reasons Hydro's so-called nuclear optimization plan, which is not really an optimization plan at all, is a mistake. I'll explain why our plan, which is a nuclear optimization plan, is a much better option for Ontario.

We call Hydro's plan plan B, because it concentrates on the Pickering B and Bruce B reactors, as well as Darlington. Our plan is called plan A, because we believe that nearly all of the A reactors at Pickering and Bruce can be simultaneously rehabilitated along with the B reactors.

In a nutshell, Hydro's plan B shuts down a large part of our province's energy capacity, throws highly skilled people out of work, deprives Ontario of at least a billion dollars in power export earnings, devastates the Bruce region communities, imposes billions in added costs for replacement fuel on ratepayers, and adds to the problem of global warming and acid rain.

Those are just the obvious and immediately measurable impacts. Still to come are the long-term economic effects of this shutdown: a less competitive Ontario Hydro just as the North American marketplace is opening up, the



desertion of industries that no longer have access to cheap power and thus are made less competitive themselves, and the reduced attractiveness of Ontario as an industrial location.

The chart that begins on page 7 of our submission summarizes the essential differences between plan A and plan B. You can see at a glance that our plan is more economically beneficial, not just for the Bruce region but for Ontario as a whole. It's also better for the environment and the longer-term competitiveness of Ontario Hydro and its major industrial consumers.

In our presentation on this chart, to avoid any argument around the data being used, we've used Hydro's information that they've supplied to you under case 2 of their proposal. We've compared case 2 with case B in terms of what we think are really the important issues: the cost factor overall, the reliability factor, the environmental factor and the overall impact on the future competition in electricity.

The only question that remains is, is the union proposal, plan A, achievable? Hydro management says no, but has made no real effort to verify this claim. We, on the other hand, went through an analysis of all the key aspects of achieving plan A. We acknowledge that there are some uncertainties about the exact number of qualified staff who would be available, but considering the big payoff for Ontario that plan A would bring, it's worth a serious effort to find out. In fact, there is no risk whatsoever in thoroughly studying whether plan A is achievable, but there is considerable risk by not even trying to find out whether it can be done and plunging blindly ahead with a limited plan B.

There are five aspects to this question of whether our proposal is achievable.

Number one is safety. Can we undertake a more complete rehabilitation of our nuclear facilities safely? The answer is yes. The plants are now safe, as you have heard from both the Carl Andognini team and the Atomic Energy Control Board. With higher staff levels, which is part of our plan, safety margins will further improve.

Number two concerns staff. Are there enough staff available to safely execute plan A? We think there are. At the very least, there is a commonsense case for studying whether we are right on this critical issue. Consider these four points:

Thousands of experienced, highly trained nuclear staff have left Hydro in the past four years, and many of them would be available if they had a chance to work once again in their chosen career. NAOP calls for two authorized operators per unit, but they have been running with only one authorized operator for 25 years.

There are many thousands of jobless and underemployed graduate engineers and technologists in Ontario who are capable of performing much of the configuration management and documentation work for the recovery program.

There is no shortage of skilled tradespersons because of the continuing slump in the construction industry.

Finally, there are skilled nuclear staff who can be recruited from other countries. Canada has often done offshore recruiting for economic development purposes, and this in fact may be such a situation. The differences between the Candu system and others present a temporary barrier at best. After all, the Andognini team had no experience on Candu before they came here to tell us how to run them.

Put all this together and you have a good case for investigating whether there actually are enough people out there, instead of just taking Hydro management's word that there aren't.

The third aspect concerns competition. Will plan A inhibit the development of a competitive electricity marketplace in Ontario? Not at all. In fact, it will help it along, for two reasons: Competition works best for consumers when there is an excess of supply over demand. Hydro's plan takes a large chunk of electricity supply out of the equation, giving consumers less marketplace power. Also, it makes no sense to open Ontario's electricity system to competition when Ontario Hydro cannot participate in the North American marketplace. Plan B cripples Hydro's competitiveness at its critical time in the transformation of the electricity industry. Plan A, on the other hand, makes Ontario a competitor.

Fourth, will plan A protect the province's consumers and assets? We've already explained why consumers are better off in a marketplace with no shortage of power, but Hydro as a public asset will be more valuable under plan A. North American electricity prices are predicted to begin to rise in four to five years, when the continent's generating surplus dips below 10%. Plan A will position Hydro to maximize its market reach when prices rise. Generating capacity surplus to the province's needs will put us in a strong position in the wider marketplace and keep prices low here in Ontario. Hydro management's plan turns us into a net importer of power for at least three years, probably more.

The final aspect of the achievability question is whether Hydro can do it. We suggest that if Hydro management feels they can't do it, you invite proposals for a private-public partnership to rehabilitate and operate Bruce A, because it is the station most in need of investment. I have no doubt that such a possibility would generate a great deal of interest among qualified nuclear operation consultants around the world, and there are several.

#### 1020

In summary, plan A is clearly the way to go if it is achievable. The economic, environmental and competitiveness benefits of this plan are so great that its achievability must be carefully explored before it is dismissed, something Hydro has not done.

It's also time to put an end to this crisis management mentality in Hydro and begin developing a long-term energy plan for Ontario in the 21st century. Nobody is doing this, and our children and grandchildren will pay for this neglect. We believe our proposal is part of such a long-term plan, and we urge you, as the ultimate stewards

of the people's assets, to maximize their value. A complete nuclear recovery is the better option for Ontario.

I'll finish by referring to the chart on page 7 to summarize the differences. These are the two options that Hydro has previously submitted to this committee. I'll just point out a few of the benefits: The cost of replacement power under what we're proposing would cost ratepayers \$1.18 billion, whereas Hydro is proposing that \$2.6 billion in replacement energy costs be passed on to ratepayers.

The total cost of the proposal that we're suggesting is a better option for Ontario is \$3.8 billion; Hydro's is \$4.4 billion. Again, these are Hydro's figures, not our figures.

Positive impact on provincial employment: Despite the fact that it's a cheaper cost, plan A that we're proposing would generate a maximum of 4,200 additional jobs that this province badly needs and yet would come in cheaper than the option Hydro is proposing — 4,200 badly needed jobs in this province.

Spending power from new jobs: The estimate is \$280 million annually and as much as \$1 billion over the period of the recovery plan.

The impact on the Bruce community: I think there should be a strong sense of responsibility, both from the government and Ontario Hydro, to the Bruce community, which opened up its community to welcome nuclear power development. Our plan would protect that community, in fact see greater job investment and prosperity within that community, as opposed to the devastating impacts the Hydro plan is going to have on that community.

Reliability, which is very important for many of the industrial and agricultural customers Hydro has, will be severely challenged under Hydro's plan. Under the plan we're proposing, reliability is not an issue, is not a problem. Our fossil plants will continue to provide the reliability factor we need, as opposed to try to make up the shortfall in base load by taking out seven reactors.

Export sales: As much as \$1 billion being lost in export sales potential over the full recovery period under the Hydro plan.

The environmental impacts: I can't overstress the issue of the severe environmental impacts the Hydro plan is going to have. Acid gas emissions will increase by almost 80% in 1998 and carbon dioxide will increase by about 50%, and that will have severe environmental consequences for us in this province.

Finally, the issue of Hydro's competitiveness: Our proposal will not only continue to allow the objective of stabilizing rates to be achieved but will make sure that when we head into a competitive environment, the debt load we're carrying on our backs will be not greater than what it is going to be under the Hydro plan; in fact, we will have a lower debt. Hydro's plan will not only burden us with a higher debt but will give our competitors, as we head into this marketplace, an advantage over Ontario.

All respectfully submitted, and I'll be glad to answer any questions you may have.

**The Chair:** Mr Murphy, thank you very much for your presentation. May I assume that this proposal was placed before the Ontario Hydro board?

**Mr Murphy:** Maybe I should clarify. My understanding of being before the committee this morning is as president of the union as opposed to a member of the board of directors of Ontario Hydro.

**The Chair:** Again let me phrase the question: Was this proposal and this plan ever laid before the board, and has the board done a technical evaluation, for example?

**Mr Murphy:** As I said, I'm more than happy to discuss any of the board issues with the committee, but my legal advisers have told me that I needed to have it clarified when I came before the select committee whether in fact I was speaking as president of the union or as a member of the board of directors of Ontario Hydro. I'm not trying to avoid the question. I'll be glad to answer it, but I need to have that clarified as to whether or not —

**The Chair:** I appreciate what you're attempting to say. As president of the union, did your union lay this proposal before the board of Ontario Hydro for consideration?

**Mr Murphy:** No, we didn't. The reason we didn't was that prior to Hydro making its decision with respect to this option, this plan to shut down the seven reactors, as a union we had met several times with Carl Andognini and his team. Leading up to the decision that went forward to Hydro to make, there was a rumour started in the field that the proposal was going to involve the shutdown of the A reactors at both Bruce and Pickering.

Both I and the vice-president of the union who represents our nuclear workers had a meeting with Carl Andognini and his team, and we asked whether this was an option being explored, because it was raising a lot of anxiety out there. I can give you the exact date and time of the meeting, if it's helpful. Carl's response to us back then was very clear, that they were looking at every option, and that the option of shutting down the A reactors was one option they were looking at but was the least attractive and least likely option for them to be going forward with. That's the information they had given us at the time, that the shutdown of the A reactors was the least attractive and the least likely one to go forward at that time. That's prior to Hydro making its decision on the reactors.

We said that was helpful, and to alleviate concerns among the workforce out there, it might be good to communicate out to the workers that all options were being looked at and to really ignore the rumour mill out there.

**The Chair:** Thank you, Mr Murphy. We'll proceed now in rotation.

**Mr Monte Kwinter (Wilson Heights):** Mr Murphy, I was interested in your proposal as to how to save the heavy water plant. The thing that interested me about it was that the implication is that unless that happens, that plant is gone. Is that your position on that?

**Mr Murphy:** Yes. My understanding both from Hydro management and some of the engineering staff about work at the Bruce heavy water plant is that the first really major hard frost at the Bruce without the trace heating being on will do irreparable damage to the piping and equipment in



that facility and that the longer-term, four- to six-week time frame of corrosion without the nitrogen blanketing will do irreparable damage as well.

That's why we've made the offer that if Hydro doesn't want to do it, if nothing else, out of respect for the work this committee is going to do, we'll be prepared to provide volunteer labour at no cost to Hydro to help box the unit up, put it together, put the nitrogen blankets on and even help offset some of the costs associated with the steam that would be required to keep the trace heating on.

**Mr Kwinter:** The reason I wanted to get that clarified is that I was at a dinner the other night at the Conference Board of Canada sitting with a bunch of people who were very knowledgeable in energy, and they said to me, "You should know that once these facilities shut down, they will never open again." Do you feel the same way about that?

**Mr Murphy:** It's certainly true for the heavy water plant. For the reactors, it makes it much tougher to look at restarting the reactors once they're shut down. If you lay the reactors up for the three-year period, as is being proposed in here, it's much tougher in terms of bringing them back.

**Mr Kwinter:** They were far more definitive than you are. They said, "If you shut them down, you will never be able to open them again." I'm just curious to know. You're saying it makes it much tougher. They said: "Forget it. You just won't see them up again."

**Mr Murphy:** From a technical perspective, I don't see any difficulty with them restarting the units. I think where the difficulty comes in is that the economic case around the restart of the reactors becomes weaker the longer they're shut down. That's where it becomes more difficult.

1030

**Mr Kwinter:** One of the other issues that came out in Mr Andognini's report is that he felt that the labour contracts were an impediment to Hydro. Could I have your comments on that?

**Mr Murphy:** Yes. If there was one area of the Carl Andognini report that really disappointed us, I guess it was around the labour issues, and not because there might be a different perspective around the labour issues but really because one of the strengths of Carl Andognini and his team was the detailed analysis they do around all the problem areas. When they look at configuration management or at the state of a boiler, they look at all the details and all the inputs and then formulate their position. But on the labour issues, what really frustrated us was that there was zero consultation with the union around any of the labour issues.

If Carl Andognini and his team had sat down with the union and said, "We think these four or five issues are really critical issues and really inhibit us in terms of our nuclear recovery," and we had discussed them, I think it's fair game for him to have a different perspective that these are problems. But the fact that there was none of that discussion I think really gets to the credibility of identifying those labour issues.

Let me use one example. He cited the issue of the right to strike; the fact that the union had the right to strike was

somehow a major impediment to the nuclear recovery or to the issue of the problems in the nuclear plants. But had he discussed it with us, he would have discovered that the union had voluntarily given up our right to strike for four years. We'd agreed to a process of binding mediation-arbitration. If we had done that voluntarily, is the issue of the right to strike really a problem? That's an example of the lack of consultation and then just forming these snap decisions around the labour issues.

**Mr Kwinter:** So as far as you're concerned, you as a union are amenable to discussing what these problems are and seeing if you can make some kind of accommodation.

**Mr Murphy:** Absolutely. Since the report came out, we have said that we are prepared to sit down and talk about any of these issues. We're awaiting the response back from Carl Andognini and his team to say, "Okay, we're ready to sit down and talk about these issues." But to date, they have not got back to us on those issues. We're waiting.

**Mr Kwinter:** The other major thrust of his report is the lack of maintenance. He talks about the lack of training and the inability of the employees to carry out these jobs. How does that impact on you as the head of the union, and what is your response to that?

**Mr Murphy:** In that respect there are probably a number of areas of the report where I think they are right on the mark, where they make sense. Certainly on the issue of the lack of maintenance, if we look at what's been happening with these plants, Hydro has known for quite some time that the staffing levels within the nuclear plants are far less than what they should be. They are certainly far less than they are in nuclear plants in the United States.

The solution to that is quite simple. You just have to staff up. You need more staff to keep ahead of the backlog of work, and you certainly need more staff as the plants get older and you have more breakdowns and more maintenance required. That's no surprise from the report, the fact that the maintenance isn't being addressed. The backlog on the training is an issue that the union had been identifying for quite some time.

Probably what happened within Hydro is that Hydro got caught up in the issue of the rate freezes, trying to achieve the rate freezes and trying to achieve them in ways of squeezing the O, M and A budgets for the nuclear businesses. Any of the nuclear managers who were there in the past — and some of them have received, in my view, pretty unfair criticism — would have not been saying anything different than what Carl Andognini had been saying for quite some time, that is: "Look, we simply don't have enough money to fix these plants. We don't have enough resources to fix these plants. Give us the resources and the money and we can turn these plants around."

**Mr Sean G. Conway (Renfrew North):** Mr Murphy, I want to come back to a point you raised earlier. Do you want to locate in specific time when it was that Mr Andognini told you that the laying up of the seven reactors that ultimately formed the centrepiece of the so-called recovery plan was the least likely or the least attractive of

the options, as he saw them at that time? When specifically did he tell you that?

**Mr Murphy:** On May 6 at 2:30, both I and Terry Pigeau, who is the vice-president for the nuclear and fossil side of the union, met in Carl's office. It was at that meeting that we raised that concern around the rumour in the field and that's when he gave us the response.

**Mr Conway:** When did you, either as a board member or as president of the Power Workers' Union, specifically hear or learn that the recovery plan was going to recommend the laying up of the seven reactors?

**Mr Murphy:** The first time I heard of it was the rumour that was in the field when we had the meeting with Carl Andognini and he dispelled it and said it was the least attractive option they would be pursuing. That was the first time. Officially, we didn't hear about it as a union until Hydro had made its decision at the board meeting.

**Mr Conway:** As a board member, can you tell us, as specifically as you possibly can, the circumstances of how and when you as a board member received the final specifics of the so-called IIPA, which was the assessment of the problem, and the so-called recovery plan? Can you give us, from your perspective as a board member, precisely when and how you received the final reports on the assessment of the problem and the so-called recovery plan?

**Mr Murphy:** When I received the package as a board member, which was on the Friday before the board meeting.

**Mr Conway:** That was approximately three days? The board meeting was a Tuesday?

**Mr Murphy:** Yes. I received the package on the Friday and the board meeting was on the Tuesday.

**Mr Conway:** Did you or your union have any opportunity to do any kind of economic analysis of the so-called recovery plan before that board meeting on August 12?

**Mr Murphy:** No, we had none. Part of the problem, being both president of the union and a member of the board, is that you have to separate those responsibilities. The information I got on the Friday I used as a board member to try to evaluate and prepare my arguments to go to the board meeting on Tuesday. But from the union's perspective, there was no opportunity whatsoever from the company to say: "Here's what we're proposing. Give us your input." So we didn't have any opportunity to evaluate it until after that.

**Mr Conway:** As a board member, can you help this committee understand — it seems incredible to me that the board would have received a final assessment report and a multibillion-dollar recovery plan with two or three days' notice and that a decision to proceed with the recovery plan was made at that meeting with no independent evaluation of the costs and consequences of the proposal, and certainly no discussion with the shareholder, apparently, as to the efficacy of that plan. What do you say to people in Bruce and elsewhere across Ontario as a board member? How do you explain such a major decision with so little time and no second opinion, as far as we can tell?

**Mr Murphy:** Fortunately, I'm in the position that I don't have to explain the board's position on that, other than to say, Sean, that I share your concern. It's one of the reasons we are actively suggesting that this whole issue is of such magnitude, from both an economic and environmental perspective, that it warrants a much more detailed analysis than it has been given up to now.

**Mr Conway:** What can you tell us about that board meeting on the 12th? The minutes certainly indicate that some board members, at least one of whom we'll be talking to later today or tomorrow, voiced a concern. We know from the minutes that Ms Clitheroe had some concerns, again about some of the numbers. What can you tell us about the atmospherics of that board meeting on August 12, which made such a momentous decision, apparently in such short order and under such remarkable circumstances?

**Mr Murphy:** I'm not trying to avoid the questions. What I am trying to do is make sure I walk the line between whether I'm here as a board member or as president of the Power Workers' Union. Let me say this: I don't believe that a decision of such magnitude can be made in a responsible way in one board meeting session, without an opportunity to thoroughly evaluate and get the inputs you need to make that sort of judgement call. That's speaking personally, as one person on the board, rather than commenting on the other members' conduct at the board. I'd be happy, as I said, if you think it's helpful, to answer those other questions, if it's clarified that I'm here as a board member.

1040

**Mr Floyd Laughren (Nickel Belt):** John, welcome to the committee. I regard you as being here as a member of the board, if that helps at all. Am I correct in assuming that you're a member of the board — putting aside your sterling personality for a moment — because you are president of the union?

**Mr Murphy:** No. In fact when the appointments were made to the board, the government at the time requested that there be a number of names submitted. There was an all-party-committee process that we went through. The government at the time was quite clear that the appointment was not by virtue of the fact of being president of the Power Workers.

**Mr Laughren:** Okay. It's important to make that distinction, I think. It clarifies to me why you're saying what you're saying this morning. I was somewhat taken aback by your position about not answering questions as a member of the board. I still find it a bit strange, but nevertheless I see where you're coming from.

What I'm wondering about is, as a president of the union then, if we can go back to that, you were made aware of the letter the minister sent to Mr Farlinger the day before the board meeting. Did you, as president of the union, get a copy of that letter, or when did you see it?

**Mr Murphy:** After the fact; not before. Floyd, could I clarify something for the committee, because it may be helpful. I want to be here, I want to be helpful. I don't feel comfortable really being restricted in what I can and can't



say. Just to be clear, I think it's really important and the people I represent think it's really important to try to have an opportunity to have a say, to try and influence the decision-makers and the board of directors of Ontario Hydro. We think there's value in doing that. We think there's value in having that happen. It doesn't happen broadly across our structures, but we think that there's an asset to having the workers at least have one opportunity, one voice, to try to influence other board members. Sometimes we're successful in our influence and other times we're less successful. We think that's really, really important.

At the same time, because this arrangement is fairly unique, we're very much under a microscope. We're very much under the microscope of some people wanting to have an opportunity to say, "Well, that's a reason why you shouldn't have a union member sitting on the board." So when I clarify those roles and responsibilities, I'm just doing it based on the legal advice I'm getting back that if this committee summons me as a director — and that was one of the issues that was looked at, am I here as a director or as president of the union? — I'm completely free to talk about any of the board issues if I'm summoned here as a director, but what I've been legally advised is that I can't if I'm here as president of the Power Workers' Union, that I'm limited to my role in that capacity.

That's the advice I got. If there's a different perspective, I'd be glad to —

**Mr Laughren:** Okay.

**Mr Conway:** You've got a good lawyer.

**Mr Laughren:** I think you've been getting advice from Charles Harnick. I want to go back to that letter because I think it's a very important letter that Mr Sterling wrote. When did you, whatever hat you want to wear, first see that letter? Do you remember?

**Mr Murphy:** I'd have to go back and check, Floyd. I think it was at the board meeting, after the board meeting that made the decision to shut down the seven reactors. I think it was at the second board meeting that it was distributed, but I'm not quite sure. I'd have to check on that.

**Mr Laughren:** The reason I ask that question and am pursuing it is that Mr Sterling, I think to his credit, quite frankly, said to the board: "Don't do anything hasty. Examine all the options and do it carefully and do it thoroughly." I'm having trouble accepting in my head that the board would simply ignore that letter. I don't know if there's any other way you can characterize it. They simply ignored that letter and accepted the recovery plan that we now know is what Hydro wants to do and which you, yourself, are questioning now as being too simplistic — those are my words — a solution for recovery.

I wanted to ask you a question —

*Interjection.*

**Mr Laughren:** It's true. I want to thank my friend Sean.

In his letter back to Mr Sterling, Mr Farlinger said: "Dear Minister: Thank you for your August 11 letter regarding the independent integrated performance assessment. I distributed the letter to our board of directors at its

August 12 meeting," and yet I hear you saying that you think you saw the letter after the board meeting. I think that's what I heard you say.

**Mr Murphy:** I can't recall, Floyd. I'd have to go back and check. It could have been at that meeting or it could have been the one after.

**Mr Laughren:** Okay. As time has gone on at the nuclear facilities — and I know your responsibility goes beyond just workers at the nuclear facility — were you aware of conditions deteriorating, particularly at the A plant? Was it a surprise to you when the Andognini report came in with its recommendations?

**Mr Murphy:** No. I think, as in a point that Monte raised earlier, the fact of an increasing backlog of deficiency reports, an increasing backlog of jumpers, all of those things, you could see them increasing each quarter when they were reported. So there wasn't too much of a surprise in any of that. Certainly we had been, as I said, identifying for quite some time the fact that the staffing levels were inappropriate in there. To us there wasn't any real surprise in any of that. What was really needed was a political will to get on and say, "You fix these problems by putting resources toward fixing them."

**Mr Laughren:** The impression I got, hearing from the Hydro officials, was that the reason they had to lay up the A plants, Bruce and Pickering, was that they couldn't deal with getting the B plants up to speed at the same time unless they diverted major personnel resources into those positions. To me it seemed quite clear that that was their position, why they wanted to do that. It wasn't because they wanted to devastate the Bruce Peninsula; it was because they thought they had no choice. I'm wondering how secure you feel that you could actually continue to operate all these units at the same time. You can't just suddenly hire experts to come in and start the job. Why do you feel secure that this can actually be accomplished at Hydro?

**Mr Murphy:** Carl Andognini said in his presentation to this committee that 75% to 80% of the problem was associated with trying to find the staff that would be required to do the recovery of the A units at the same time, that that would involve 4,200 additional people, and that he somehow instinctively knew that those 4,200 people were not available. The reason we say we believe they are available is that Hydro hasn't come forward with any evidence that I can see that could satisfy us or this committee that they've made an attempt to find out if those people are available.

What are those people? We start with operators, because they're usually the critical resource in there. They're operators. Hydro's staffing practices in the past have been that they hire operators, who are people with a grade 13 education. They're brought in, put through a training program and hired. Hydro hasn't run any vacancies that I can see, saying: "Are there grade 13 graduates out there that want a job as an operator? Come in and we'll put you through a training program." It's not like we haven't done this before. When we went from four units at

Pickering to eight units at Pickering, there had to be a massive hiring program at the same time.

The same thing is true of control technicians, which is the next level that you need to get the deficiencies down and the backlog of jumpers done. Control technicians are typically electricians. They are readily available to be hired, with the massive unemployment that we have in the construction industry. The same with mechanical maintainers; highly available in the construction trades out there and could be hired back in.

The same is true for our clerical or our civil maintainer classifications. The technicians that we represent; lots of people coming out of community college or coming out with graduate degrees who would love an opportunity to go in there and could be put to use. On the engineering side, as we point out in our submission, lots of engineers are coming out that we think would be readily available; people who left Hydro. As a short-term fix, it would be cheaper to bring some of those back — a hell of a lot cheaper — to see if it could be done.

The bottom line, Floyd, is that there hasn't been any effort made to try to see if those 4,200 people, which was the premise for shutting these down, are available or not. Maybe 4,200 are not available, maybe you can't get enough staff to prevent the shutdown of seven reactors, but if you could prevent the shutdown of three reactors as opposed to seven, you would be cutting the amount of acid gas and carbon dioxide that we're going to be pumping out into the environment and reducing the amount of replacement energy power that we're going to be buying from the United States, and overall minimizing the amount of additional debt that we are going to be adding to Hydro.

That's the test really that we're putting forward, to challenge Hydro to show what efforts they have made to be satisfied that these resources are not available, not just a decision that says, "We instinctively know they're not."

1050

**Mr Laughren:** My sense is that the committee has been somewhat taken aback by the recovery plan. They might not have the same views that you do in terms of the nuclear option being the recovery option, but I think there is a sense that the recovery plan was laid before the board in haste and decided upon with great haste and that therefore some of us are very sceptical about the plan that's there now.

I am open-minded certainly, and I suspect my colleagues are, on where we should go from here, whether it's your plan or whether it's somebody else's plan, but at the present time some of us are very sceptical about the existing recovery plan.

**Mrs Barbara Fisher (Bruce):** Good morning, John. It's good to see you again. I will spend about half my time on the general form. I'm accused sometimes of paying particular attention to the Bruce, but I will never apologize for the fact that's the riding I represent and is most highly impacted, so it makes sense. When you look at the total impact of the whole picture, whether we're talking Bruce, Darlington or Pickering, half the impact is at the Bruce, so I think it has to be talked about.

Let's talk about the generalities to start with. My understanding from anything that I have read so far and in discussions with some of the chief stewards at the Bruce site, and I even had the opportunity to do so with Pickering as well, is that you are generally supportive of the review, that there needed to be something done. You are generally supportive and you took exception to the comments with regard to labour.

**Mr Murphy:** If I could clarify that, certainly we knew that we had declining performance within nuclear. It made sense to try and find out the extent of the problem. Where our criticism kicks in is jumping from, "Here's the problem, and here's the one and only solution to be acted upon in a very, very rapid way." Our criticism is more around that — "Is this the only solution? Is this the best solution?" — as opposed to the extent of the problem.

**Mrs Fisher:** So it's the issue of not having enough options to consider to make sure that we have the right one once and for all, as opposed to the other ones that — we had Mr Strong in here last night and one of the questions I didn't get to talk about was the number of attempts that had been made in the last five to 10 years — Dr Bishop referred to it, and the safety aspect as well — and it was repeated attempts of failure and didn't really result in anything that helped any of us sitting here today. The common good is for the good of Ontarians and access to affordable electricity. I don't think the past is a good example of what we should follow.

Also in the general picture, the issue of staffing tends to irritate me a tad, if you have been following the hearings throughout the process to date. I wasn't a strong supporter when this golden handshake happened, not because of the money side of it. It's almost an I-told-you-so story, but I don't want to be that way. Everybody was saying, it wasn't just me, that in fact we would be draining the brain power and the resource that we needed. I don't think you disagree with that. Right?

**Mr Murphy:** Certainly the loss of expertise from Hydro was not managed well. It was driven very much I guess by number crunching, trying to achieve targets of reduction of bodies without any consideration given to what it was doing to the overall demographics of the organization and what it was doing to the expertise and skills within the organization.

**Mrs Fisher:** I asked Mr Strong last night if there had been a strategy, and he didn't really say yes or no, but I also know that there wasn't. It seemed to be those who came forward got bought out and now it's causing us major problems. It wouldn't take a genius to figure that would have happened. If I was to look somewhere, that's where I would be looking, that period of time where that bad decision was made that right now is effectively hurting all of us.

Let's talk now a little bit about the restaffing issue. Mr Conway, throughout the course of the hearings to date, Mr Laughren as well, and we have been addressing the issue. I come back to the issue that if we have put hundreds of millions of dollars of training into these laid-off workers, some who are very, very valuable to us now, even includ-



ing up to first operators who took the buyout thinking that on a pension basis it wasn't so bad, if Hydro was to change its policy with regard to rehiring these people, which it seems to be doing anyway, against policy, I understand — but if they were to change their minds about that — I asked the question of Mr Farlinger and of Mr Kupcis, who isn't there but I wanted to hear his opinion, and Mr Strong last night, why wouldn't we shop locally and buy back our talent and address the issue of the human resource proposals which the IIPA identified as being the major problem? Would you agree with that?

**Mr Murphy:** I agree. Again, I think the proper measurement tool for looking at this issue really should be, what's the best in terms of economics for the people as a whole in the province and what's the best from an environmental perspective. If that means that we can have a cheaper option, less environmentally damaging, by going back out and hiring people who have gone out on a golden handshake, let's do it. If that's cheaper and better for the environment, let's do it. I don't have a problem with any of that.

**Mrs Fisher:** That's kind of admitting, quite frankly, a very significant, multimillion-dollar mistake, but I think that is something that should be considered.

During Mr Andognini's time with us here, he suggested that there were substantial difficulties between management and union, and everybody has acknowledged that there is a cultural problem here. I'm not so sure we would go as far as the word that has been used otherwise, but nobody seems to disagree that in fact a cultural problem exists. I am concerned about one thing here. I keep hearing that if there aren't enough people and there has to be this new culture, neither of the plans, yours nor the one that is before us, addresses that. If that's a significant stigma or attack point, if you will, to making this thing work again for all Ontario, why does your plan not address that?

**Mr Murphy:** The problem is that the reality in any workplace is that you end up getting the union you deserve. There's an old adage that you get the union you deserve. The approach that our union has taken consistently is that we are much more effective when we are being cooperative in the workplace as opposed to being confrontational in the workplace. We're much better at representing our members, getting our members' issues dealt with, if we can make the business that we are in successful. That's the approach we take.

Unfortunately, we're not really in the driver's seat. The employer is the one in the driver's seat, and Hydro has been plagued, probably not a whole lot different from a lot of other employers, both private and public, with a history where what goes on in the workplace has less to do with what makes sense and more to do with the sort of human power struggle where management sometimes gets overwhelmed, where they want to feel important in the workplace, be the boss and feel really important, and that takes priority over trying to nurture good relationships with the union.

As I said, we're on record, and I'll state it here again before this committee, that given the opportunity, we're

prepared at any time to try to work cooperatively with the company to turn these problems around, to make the company more successful, because we think that's in the best interests of our members.

**Mrs Fisher:** I will say that I am personally disappointed that neither plan addresses it, and I hope before we finish and come up with a plan that it's not only just words, that there is an action plan that somebody can say in the end when it doesn't work who, this time, is responsible and then accountability is going to be an issue. I personally find it a huge failing point in all the reports so far.

I've got about four more minutes I see. I want to talk a little bit more now about the issue with specifics, because almost half the impact does come from one very small community, which happens to be rural and doesn't have the opportunity for diversification that others do.

I'll dwell a little bit first on the point that you have raised, and I know that the information is available through the Bruce Community Development Corp as it relates to the community impact. In the past, Ontario Hydro went forward and it asked the community for input before it made these types of decisions, because it has a moral and social obligation to the community to offset some of this factoring. As a board member, I want to ask you clearly, when you were there and these presentations were made, at any time was there any discussion with regard to the community impact before the decision was made at the board?

**Mr Murphy:** I can certainly recall discussing it at the decision-making board, but I can't recall if it was discussed prior to that, at boards leading up to that.

1100

**Mrs Fisher:** I know Ontario Hydro didn't have available to it until last week the same types of information as prior to the decisions in the past.

**Mr Murphy:** Sorry, what I meant was in a general context. Raising the impact on the community, there were no specifics at any time in terms of numbers, finances, jobs or total community. None of that was ever discussed at the board that I'm aware of.

Let me go back on one point because I think it is really important, the issue you raised around addressing the cultural issues in the workplace. I think it is addressed in our report. Let me illustrate again why I think it's addressed in our report.

I don't know too many unions that are out there that would be going to an employer, saying, as we've said in our report and as we wrote to the company last week, we'll provide free labour to help fix some of your problems in the heavy water plant — free, no cost, volunteer labour to do it — and not only that, we'll help provide costs, some money, hard cash to help offset some of the financial issues associated with keeping them on. I think that's a significant gesture from the union in terms of what kind of relationship we want in the workplace.

**Mrs Fisher:** I acknowledge that and I think it is a changing pattern.

I would ask this one other question then. My concern is on a technical issue now, whether it's at Pickering or whether it's at Bruce or whether it's at Darlington in the future. Mr Andognini is proposing a dry lay-up for the Bruce A site. I happen to have done enough homework to understand that's never been tested with the Candu system in the past and I also am very familiar with the fact that Ontario Hydro never does anything within the financial boundaries it sets for itself; it's always more than. I would be delighted to see it less than on a regular basis.

Having said that, my concern, and it was sort of implied earlier in the questioning here, is a question relating to if they shut, they shut forever. That's obviously a concern for us at Bruce and it will ultimately be for Pickering as well, because if you start the run, you don't end the run.

What should we be looking for in our questioning before a decision is made, if there is any other decision made than what's before us now? Could you recommend to me an external, unbiased consultant whom we might talk to who would tell us about the value or non-value of a wet versus dry lay-up? I'm talking any Candu system now. Bruce is number one because it's on there right now, but we'll be facing the same thing at Pickering and we'll be facing the same thing at Darlington. What outside specialist might we find who knows the Candu system, the difference between the wet and dry lay-up and technically whether it's going to cost us more because of it?

**Mr Murphy:** Off the top of my head, Barb, I would have to get back to the committee on that, and I certainly will get back to the committee on that. I'll pass that information back to you.

**Mrs Fisher:** Do you share the same concern?

**Mr Murphy:** Yes, I think it is a concern. The first group that does spring to mind, though, is Atomic Energy of Canada. They have a lot of expertise in that area and they may be able to say whether there are technical differences between the wet and dry lay-up. But I'll certainly look and find out if there are any others with expertise who have experience with Candu that might be helpful.

**The Chair:** Mr Murphy, that concludes the time at this moment before the committee. I have a couple of questions to ask before you go and I must confess that I'm a little perplexed. I'm a little disturbed that it's been difficult for you to speak as a member of the board. You are a member of the board. You occupy a position within the union, but this committee I think has a right and a responsibility to explore your experience and your representation as member of the board of Ontario Hydro.

Let me begin by asking a question. Are you prepared to accept an invitation to attend upon this committee in the capacity as a member of the board?

**Mr Murphy:** I'd be delighted to.

**The Chair:** I want to go back to a question that was raised by several of the members and I really would like you just to clarify for me. It goes back to an issue involving the board meeting on August 12. On August 11, Mr Sterling sent a letter to Ontario Hydro. You have seen a copy of that letter and you realize in that letter he was asking for all alternatives to be considered. I find no

notation of any discussion of that letter in the minutes. Can you explain?

**Mr Murphy:** I'll have to check my notes again on that but I think the reason might be because it may have been distributed in the in camera session.

**The Chair:** I see. Would that in camera meeting have been held before or after the meeting where the substance of the recovery plan was approved?

**Mr Murphy:** They're normally done before, although they also have varied. They've had in camera sessions at the end of the board session as well.

**Mr Doug Galt (Northumberland):** On a point of privilege, Mr Chair: Isn't the whole meeting in camera? It's not a public meeting.

**Mr Murphy:** No, there is an in camera session, "in camera" meaning that it's just the board members, without the staff that participate in the board meetings.

**Mr Galt:** That's what you're referring to as in camera, without staff, rather than without the public?

**Mr Murphy:** Yes.

**The Chair:** Will you take it upon yourself to advise this committee at your earliest convenience when you were informed of that information?

**Mr Murphy:** Yes, I will.

**Mr Conway:** I just want to be clear again on the Chairman's point, because this is an absolutely central question. To the best of your knowledge, Mr Murphy, as a board member, you do not believe that you saw Minister Sterling's letter asking the board to consider all options, to the best of your knowledge you don't remember seeing that letter until after the board approved the substance of the so-called recovery plan?

**Mr Murphy:** No, Sean, I'm not saying that. I said it wasn't exactly clear to me whether or not it happened the day of the board meeting or whether it happened after the decision was made, the minister's letter. I'm just not 100% certain on that.

**Mr Conway:** John, it's only two and a half months ago and this is not an everyday letter. This is a letter from the shareholder, this is from the Minister of Energy. It couldn't be clearer. You apparently voted against the recovery plan and what I think this committee has to know and what the public has a right to know is, in due diligence, did these board members see the shareholder's letter before they made the decision?

**Mr Murphy:** I think it's a fair question, Sean. I can clarify that. I'm not 100% certain whether that letter was distributed before the board made its decision, but I will get back on that.

**The Chair:** We will come back to that, Mr Murphy, and you have agreed that you will attend upon the committee. I want to be very clear with you that while I appreciate the presentation you've made on behalf of the union, I have in fact directed a letter to the chairman of Ontario Hydro that is going out immediately asking for the comments of Hydro upon the proposal as put forward.

**Mr Murphy:** Okay, great.



**The Chair:** That's in fairness to see that, but I want to ask you in that regard, when was your proposal developed? Was it before or after August 12?

**Mr Murphy:** After August 12.

**The Chair:** So it's been formed in the last few weeks?

**Mr Murphy:** Yes, we've been working on this since August.

**The Chair:** Thank you, Mr Murphy. I appreciate your attending the committee and I appreciate your agreement to respond voluntarily to the committee. You might check your calendar for me and advise if you would be available at about 10 am on Thursday the 23rd, if you would be good enough to check.

**Mr Murphy:** I'll make myself available.

**The Chair:** Thank you very kindly. Then we'll put you on the witness stand at that time. I appreciate your time.

#### ROBERT FRANKLIN

**The Chair:** The next witness to come before the committee is Bob Franklin, a former chairman of Ontario Hydro. Welcome, Mr Franklin. For the purpose of Hansard, if you'd be good enough to identify yourself, then we're in your hands.

**Mr Robert Franklin:** Thank you, Mr Chairman, ladies and gentlemen. My name is Robert C. Franklin. I'm a former chairman of Ontario Hydro. I'm here to help you in any way I can in the rather onerous task that you have. It's a difficult task.

I can think of two areas that I might be able to help you in. One is of course the years 1986 to 1990, inclusive, when I was at Ontario Hydro as either president or chairman or both. There's another area which I might be able to help you with that has to do with safety culture and the impact of major losses of staff on safety culture. Since I've left Ontario Hydro I've had an opportunity to become informed on this particular subject. I don't profess to be an expert, but I have had three or four years of exposure to it. If I can be of any help in that area, I'd be pleased to do so. I have no other opening statement.

1110

**The Chair:** Thank you very much, Mr Franklin. I've noted your particular interest in the area of safety. Let me begin the questioning with the third party caucus.

**Mr Laughren:** Mr Franklin, welcome to the committee. I guess when I talk to you I have to get my mind going back a few years.

**Mr Franklin:** About 12 years.

**Mr Laughren:** You were chair of Hydro when Darlington was being built, as I recall, right?

**Mr Franklin:** I joined Ontario Hydro in February 1986 as president. I was not the senior executive because in those days the chairman was the senior executive. Mr Tom Campbell was the chairman of the day. He left around January or February of 1988. The government of the day asked me to take on that additional chore for a short period of time. I continued to do that until I left Ontario Hydro in the spring of 1991. During the period I

was there we were in the last four or five years of the construction, which you know took a very long time.

**Mr Laughren:** While you were there, were you aware of this — I don't even know how to describe it; others have used words like "cult" and "culture" and so forth. Were you aware of the kind of environment that was developing in the nuclear facilities?

**Mr Franklin:** I don't subscribe to this definition of this atmosphere, or whatever you want to call it, as a cult. I think that's a misnomer, frankly. I don't even agree with Dr Kupcis's description of it as being a priesthood, I think it was.

**Mr Laughren:** Yes.

**Mr Franklin:** I think these people working in those particular plants realized they were dealing with the most sophisticated technology Ontario Hydro had to cope with. They were the most skilled and the most trained, and I think they felt themselves kind of an élite, but I do not subscribe to the priesthood or cult description of them.

**Mr Laughren:** This is a bit off topic, but I hope you'll forgive me. Part of the problem — it all gets meshed together with the increased rates and the problems with Hydro in restructuring, cutting back on the workforce and so forth — it seems to me is irretrievably linked to the escalation of costs at Darlington. I remember that when it was started, when projections were being made at the beginning, it was going to be \$4 billion or \$4.5 billion, and the final costs were about \$14 billion. Did you have any sense of that happening as time was going on?

**Mr Franklin:** I don't think it had an impact on the operating plants. There's no question that the board and the management were wrestling with trying to bring that project to completion and were worried about the cost of it. Those costs were capitalized costs at the time. Really the design and construction division of the company was isolated from the operating; it was not part of the operating branch at all. So I don't think there was a direct connection at all between the two.

**Mr Laughren:** You don't think that because of the — I mean, when the costs became part of the rates —

**Mr Franklin:** Oh, well, that's different. I would agree with you that when it was finished, which I think was in 1990, when it was first turned on just a few months before I left, there is no question that at that time, when it came into the rate base, the pressure came either to reduce costs or to increase rates, because that cost had to be covered. You're quite right there. I thought you were talking about during the construction.

**Mr Laughren:** Also we've been told that one of the main reasons the nuclear division finds itself in the pickle it now is in is because preventive maintenance did not occur, right from the beginning basically. I'm wondering to what extent the senior management at Hydro were aware that this was not happening but felt unable to do anything about it because of the impending escalation in rates when Darlington came on stream.

**Mr Franklin:** You're not talking about Darlington only; you're talking about all the plants in general, I assume, Mr Laughren?

**Mr Laughren:** Yes.

**Mr Franklin:** The time it came most noticeably to our attention was when we got a one-year licence renewal instead of the normal two. I think that was in 1988. There was a recovery plan established then, as you know, and it didn't work well. That came to our real attention when we got a second one-year licence in 1989. I should tell you, though, that from 1986 to 1990, if you examine the financial statements, you will see that the funds provided for operating budgets to the nuclear division more than doubled. It went up more than 25% a year. That's as fast as you can feed resources into any kind of division and expect to have them integrated. It's like taking a drink out of a fire hose. If you take it any faster, you can't swallow it. So there was a rather remarkable increase in operating and maintenance budgets for the nuclear division during that period of time.

In 1989, when we got the second one-year licence, in addition to what I've been talking about as doubling, an additional 1,100 people were approved by the board for the nuclear division. They started coming on stream in late 1989 and 1990, I guess.

In 1990 we got a two-year licence. I took some comfort in the AECB in effect saying to us: "You are returning to normal. You're now getting a second-year licence." I left shortly after that, so I'm going by what I read in the transcripts here. I think Dr Kupcis said that, with modest adjustments, 1992 was a rather peak year. I thought, until I started reading the testimony beyond 1992, that we had turned the corner on that difficult period in 1988-89.

**Mr Laughren:** You mentioned in your very brief introductory remarks about being able to give us some advice on safety, words to that effect. What advice would you have for Ontario Hydro's nuclear division now, as they head into this restructuring period?

**Mr Franklin:** My comments were directed more towards safety culture than the technical side of it, because I'm just not qualified to do that. Safety culture is rather a new concept. It was really started in 1991 by the IAEA when they first defined "safety culture." There were elements of safety culture before, professionalism of the nuclear operator and things like that, but the entire concept was really developed by the IAEA in 1991. I jotted down their definition. It's a paraphrase, because it's about four paragraphs long.

It says it is that assembly of characteristics and attitudes in organizations and individuals which establishes that nuclear plant safety issues receive overriding priority. You can't have two first objectives; you must have only one first objective, and it is safety if you want to have a good nuclear safety culture.

It goes on to say there are two components. The first component is that senior management must make nuclear safety its first and primary goal, and must reinforce it with their actions, with their everyday behaviour. The behaviour of the plant staff in a safety culture world is by and large intangible; it's like trying to define any other kind of culture, it's difficult. It's usually a code of behaviour by which people are operating or living, depending on the

situation. It is handed down from one generation to another by the older generation's behaviour and by the older generation's refusal to allow younger members of the community they're dealing with to transgress it.

#### 1120

Just because it is invisible and unwritten doesn't mean you don't know it when you transgress it. When you have a very good nuclear culture and the senior person is always going through the radioactive monitor and he sees someone who doesn't, it's not the supervisor and it's not the manager who climbs all over that guy, it's his colleague because he has transgressed one of the rules.

That is kind of a definition and concept of nuclear safety, and I could go on if you wanted in this regard. What I tried to do was to apply what I know about safety culture to the main programs that I think Mr Andognini was talking about in 1993 — the downsizing and the decentralization — to see whether or not the impacts of those things would in effect have any serious effect on the safety culture.

**Mrs Helen Johns (Huron):** Welcome, Mr Franklin, and thank you for being here. I'll start off by saying that I've been reading a little bit in clippings and things while you were in the position from 1988 until 1991. You certainly reigned at Hydro in a very tumultuous time, I think. Let me ask you, first off, did you have regular meetings with the Premier of the day and the Minister of Health and the ministry people so that there was a flow of information from Ontario Hydro to the government?

**Mr Franklin:** Communications between Ontario Hydro and the government took a lot of channels. Almost every division in Ontario Hydro had its own link to a comparable one in one of the ministries — whether it be in the Ministry of the Environment, whether it be the Ministry of Natural Resources or financial people with the Treasury — and these were every day kind of contacts. The communication was quite strong. In addition to that I would meet with the Premier, not on a regular basis or a stipulated basis, but when there was an issue he wanted my advice on, or I needed his. I met regularly with Mrs McLeod who was the energy minister. These were not regularly scheduled ahead of time, but we tried to get together at least once a month on a formal basis so I could apprise her of things like what's going to the board, things like that. Then we would meet more often than that on just a sporadic basis.

**Mrs Johns:** I just wanted to ensure there was a flow of information between Ontario Hydro and the government of the day. During your time frame, there already started to be reports from the Atomic Energy Control Board that Ontario Hydro had some deficiencies, and these deficiencies obviously have come forward to this day as a result of the IIPA. No doubt the board was aware of those because you had to deal with the atomic energy board. Can you tell me why the public doesn't appear to have been informed, or what actions you took at that time to ensure that the shareholders, the taxpayers of Ontario, were cognizant of the problems that were happening, specifically in the nuclear division.



**Mr Franklin:** Whenever there was a shutdown of a plant, planned or unplanned, there was a media release. The government's different departments that were involved would be informed ahead of time, so there were always things of the type you're talking about. Where there was a problem in a nuclear facility, it was always public information.

If there was a planned outage and it was going to be extended, then there had to be another press release to say that as well. If there was a licence that was not being renewed for a normal two-year period, or one-year period, not only did we make a press release and inform the government ahead of time, but so did the IAEA.

It may look in hindsight that there wasn't public awareness of it, but there really was. If there was a spill or an incident of some kind, the first person that got notified was the regulatory agencies of the Ministry of the Environment and the IAEA. The press release would go out and the media got it. If it happened on a Friday, and they couldn't reach me, I sometimes heard it on the radio before I was told about it. I think there was regular communication on the major aspects of the nuclear plant.

**Mrs Johns:** But the atomic energy board was already starting to complain that they notice problems and they can't get fixed.

**Mr Franklin:** Right.

**Mrs Johns:** What exactly did you try and do to correct these situations?

**Mr Franklin:** I'll give you a list of things which came to my memory, because I thought you might ask me that question, and I am going by memory for the last eight or 10 or 12 years or whatever it is. I've already spoken about the large increases we had in the operating and maintenance budgets of the nuclear division. They ramped up quite severely in the last three years because of the problems you're talking about.

We also had hundreds of millions of dollars in capital modifications going on at the same time. I was confident that the management of the day in the nuclear division could handle that because we had on our staff at the senior levels some of the most experienced, well-known world reputation people in the nuclear field. They would only be names to you but when you talk about Elgin Horton and Sam Horton and Bill Morison and Lorne McConnell, you're talking about people who would be recognized around the world even today.

Besides the large ramping up of operating and capital expenditures to try to turn this thing around, and 1,100 new jobs in 1989, there were a few other things we did. We established for the first time in Canada a domestic peer review. When I finally got a couple of years under my belt in this job and I had travelled around and saw some of the other nuclear utilities, I could see where there were gaps in Ontario Hydro. These gaps weren't filled necessarily because of the difficulties — some of them happened before they came to our attention and some happened during the period — but let me just give you a few examples.

We created the first domestic peer review program in Canada and it was modelled on a lot of other international ones. We invited the IAEA to do an OSART, or operational safety review team mission, the only one that's ever been done, I think, in Ontario Hydro. It's like a peer review but it's done by the International Atomic Energy Agency. I wanted to strengthen the governance part of the corporation, so I asked the government of the day, if you have vacancies on the board that you don't intend to fill by extending the terms of the people there, we could use some more people who understand the technical and nuclear aspects of the business.

**Mrs Johns:** Let me ask you this question: We've heard over the last few days that in the late 1980s and the early 1990s the maintenance budgets were cut in all of these areas to be able to put as many funds as possible into the building of new plants. I also see when I read the clippings that you were in the midst of trying to stop a union dispute, where in effect at the end you gave them a 6.9% increase, so that would allocate some of your maintenance and administrative budget increases, even though people before us have told us that the actual maintenance dollars were being pushed down to allow you to put every resource into building because of the Darlington plant.

I have a comment that says here that you basically had no choice. I have a document from the Toronto Star that says you really had no choice in settling this strike because the last strike in 1985 cost you \$40 million in power purchases. The union was just in here, a few minutes ago, and tried to talk about the partnerships that evolved, that they wanted to be in with Ontario Hydro. Did you experience that kind of partnership when you were dealing with this pending strike?

**Mr Franklin:** The pending strike was in what year?

**Mrs Johns:** In 1990.

**Mr Franklin:** Right. First of all, I do not share your view that the maintenance budgets were being reduced. They were not being reduced. A simple look at the financial statements will show that in the years 1986 to 1990, they more than doubled in the nuclear division; I'm talking only about the nuclear division.

**Mrs Johns:** Are there salaries in that budget? Because you gave them a 7% raise.

**Mr Franklin:** Yes, we did in one year. There's no doubt about it. But that would still have a very healthy increase in the operating budgets of the nuclear division. We didn't give them 7% every year, either. I'm talking about an average of 25% a year over that period of time. Whoever's telling you that the funds available for nuclear operations and maintenance went down — it's just not a fact.

1130

With regard to the 1990 strike, back before I joined Ontario Hydro they had had a confrontation with the union. In those days they decided they would try to run the nuclear plants in the absence of the union members, and they did but it was very difficult and I don't think very successful. In 1990 things had changed. We had no possibility of running the nuclear plants. We told the union that

we could not run the nuclear plants if there was a strike, that we wouldn't try.

We went right to midnight of the day of the strike call and we were still apart. The union said, "We are going to start shutting the nuclear plants down," because you have to have 24 hours' notice to shut them down in an orderly way, and the first units started going down. We settled, probably that amount you're talking about. I'm not sure what was the amount now, it's too long ago, but we did settle on the doorstep of a strike. I say it was a strike because in fact the plants were being shut down.

There was no way in my mind that Ontario Hydro could allow a strike to take place. You're talking about an essential service. You're talking about a life-threatening situation for a lot of people if there is no electricity, people on life support systems and everything else. You can imagine the chaos. There was just no way we could have kept the lights on without those nuclear plants.

**Mrs Johns:** Isn't it a problem then with the way Ontario Hydro is set up, that unions have the ability to close these down? It is an essential service.

**Mr Franklin:** It's whether or not you believe it is an essential service and should be declared so.

**Mrs Johns:** If the lights don't come on, we don't have jobs in Ontario.

**Mr Franklin:** I want to explore two or three areas, but I just want to pick up this point, Mr Franklin. In the mid-1990s Ontario Hydro is producing about 63%, 64% of its total output via nuclear generation. Is it not true to say that any utility delivering a commodity as basic as electricity that is two thirds dependent on nuclear power can't take a strike?

**Mr Franklin:** I don't think it can take a strike, no. That is why we made the decision in 1990 to tell the union, "We will not run these plants." It didn't take a genius to then figure out that it would be very difficult for us to take a strike.

**Mr Conway:** Just to be clear, because the labour-management issues are some of the most difficult and political and troubling that I'm sure the Hydro board or this committee or any other committee is going to face, I'd like you to comment on what seems to me an obvious point: A monopoly that is delivering electricity and is substantially dependent on atomic power can't take a strike, obviously, and that condition is going to create a very special kind of collective bargaining, isn't it?

**Mr Franklin:** I always felt I was at a disadvantage in negotiating with the union, because they are intelligent people and they realized the situation: that management could not afford to have a strike. We never told them we wouldn't have a strike, but we did tell them we wouldn't try to manage the plants.

**Mr Conway:** My memory is that in the mid-1980s and in 1990, the labour difficulties came to a critical point about the time a provincial election was expected, if I'm not mistaken, in 1985 and again in 1990.

**Mr Franklin:** I wasn't even living in Ontario in 1985.

**Mr Conway:** What were you doing before you became president of Ontario Hydro?

**Mr Franklin:** I was enjoying a 30-year career with Canadian National Railways. I was executive vice-president and president of Canadian National Enterprises.

**Mr Conway:** That's my memory. Against that backdrop, I want to ask you to comment as best you can about a board culture that has really started to occupy this committee; that is, the Hydro board culture. I want you to think about not only your time at Ontario Hydro but your time at the CNR.

We have been told that in the winter and spring of 1997, against the backdrop of an increasingly upset federal regulator — you may know this, but if you don't, let me tell you that the chair of the AECB was in here basically saying they were very close to just shutting down Pickering because of poor performance. Andognini is brought in by Al Kupcis to do a brutally honest assessment. It is a brutally honest assessment, apparently.

The board of directors at Ontario Hydro basically gets two documents, John Murphy tells us, a couple of days before a board meeting on August 12. One of them is the assessment of the problem, which apparently is quite colourful and brutally honest, and there is a recovery plan that among other things entails proposed expenditures of somewhere between \$5.5 billion and \$9 billion. The board gets those documents on or about the Friday before the Tuesday meeting, so that would mean August 8 or 9.

The board meets on August 12. They get a minister's letter. We now know that the minister wrote a letter the day before the board was to meet, August 11, saying, "Before you make any decisions, I want you to look at all the options." The board meets on August 12 and approves, that day, the substance of this multibillion-dollar recovery plan, without any more time than that, without a second opinion, without hardheaded assessments of the financial implications of this. Would you comment on that kind of board culture, which some of us find really remarkable? Is it remarkable, do you think, that they did that?

**Mr Franklin:** I've never been in that situation of getting a proposal to consider that is \$8 billion or \$9 billion. I wasn't there so I don't know all the information they had, but I understood that the decision they made was not irrevocable, that it was a decision pending the receipt of other information. I just assumed they were going to get this other information, and if it dictated a change in course, they would change the course.

**Mr Conway:** But it would be unusual in your experience, not just at Ontario Hydro but at the CNR and elsewhere, for a board to make those decisions in that fashion.

**Mr Franklin:** It's a rather quick decision. I've never experienced a situation where they've moved that quickly on such large projects as that, but I reiterate, if it's an interim decision and can be altered, then it's not a final decision.

**Mr Conway:** I want to come back to a point Ms Johns was making. I have before me the AECB documents that were tabled with this committee two weeks ago: a November 14, 1989, letter to you from Mr Lévesque, who was then the president of AECB, who raises very real concerns about the decline in operating standards at



Bruce, and a response from you to Lévesque on December 15, 1989, which indicates some very serious and pointed concerns from the AECB. In your response, you indicate that you're going to be spending the resources, that you're taking a number of measures, and you point out that one shouldn't expect these changes are going to take effect or produce results overnight.

Then I move forward to just about the time you leave. You leave Hydro when?

**Mr Franklin:** March 1991, I think it was.

**Mr Conway:** In November 1991 we have this remarkable document, a memo that reports on an AECB-Ontario Hydro summit on November 4, 1991, at which meeting the sainted Elgin Horton, whom we referred to a moment ago, says in the presence of the then chairman, your successor, Mr Elieson, and senior people at the AECB that he's not only frustrated but he's humiliated that the situation isn't getting any better.

Bob, my question is, why didn't these measures, on your watch and subsequently, take effect? Just about the time you are leaving some of your principal lieutenants are confessing to the federal regulator, "We agree, it's bad and it's getting worse, and we're humiliated about it." What was it in the air and the water at Ontario Hydro at all levels that prevented this change, this improvement that apparently everybody wanted from taking effect?

**Mr Franklin:** I think there were some situations that had never been encountered before. First of all, I don't believe the failure to turn around was a lack of resources because the resources were certainly turned to it. As I've explained already to some extent, there were a lot of resources put in there.

1140

What I think might have been different in that situation than what these rather remarkable men I talked about earlier had ever encountered before was the phenomenon of aging — and I mean plant aging, not men aging. In 1988-89, only 5% of the plants in the world had reached the midpoint of their lifespan, so aging had never been a problem before, had never been encountered before. These plants were the first generation of Candu plants, Pickering A and Bruce A particularly. They had design and engineering defects that were corrected in the later ones, pressure tubes and metallurgy and other things like that. I think the combination of the older plants and the fact that they were aging created a maintenance and operating difficulty that these men had never encountered before.

Right now, 25% of the plants in the world have reached the midpoint of their lifespan, so the phenomenon of aging is much more at the forefront than ever before. It has been established now that the peculiarities of aging are quite different from the operating and maintenance procedures in a young plant. I think they probably failed to recognize that the plants were aging and that they required a different kind of operating and maintenance program. That's the only thing I can think of, because they had the resources.

I believe they had the best personnel to handle it, and still they could not do it. It would frustrate an Elgin Horton, who was a very professional man who wanted to

do the best job he could, who probably was beside himself saying, "What is it that I'm not doing that I should be doing?" I don't think he had encountered this situation before.

**Mr Kwinter:** I just really want to pick up on this aging problem, because one of the things that struck me quite dramatically is that the AECB commented that literally within months of the opening of Darlington, the maintenance there was as poor as it was at Bruce and at Pickering — literally within months. That was what was so frustrating.

There was this — call it a culture. I think it was really a matter of there was a certain oblivion that this was an issue. You talk about this safety concern, that it should be number one. I don't think, certainly at the board level or at the management level, that it was number one. We heard from Mr Kupcis that 40% of the directives from AECB had been corrected. Some of them were outstanding as long as seven years. We hear a report from AECB saying that virtually immediately after Darlington opens, the same problems of maintenance are there as were at the others. Either there is something wrong with the ability to communicate the importance of safety — and I agree it should be number one, it should be the thing. How do you explain that?

**Mr Franklin:** I don't know the start date of the seven-year lag time. I assume it's 1997, so we're talking about a period — I think Darlington came in in 1990 or 1991. It came in in dribs and drabs, as I recall.

I don't know how to explain to you that safety was number one in Ontario Hydro, because it was. If you know something about safety culture, you know that you must be persistent and consistent in your messages and the senior officers must exhibit a behaviour which reinforces that whole thing. Let me tell you about some of the day-to-day things that a senior officer would do to do that.

**The Chair:** Do that very quickly, please, Mr Franklin.

**Mr Franklin:** Whenever I was out with my family and I ran across some team doing some work on a pole somewhere or other, I always stopped and went over to see the foreman. The first question I would ask him is, "Did you do a tailgate this morning on which you planned all this activity?" Often he would say, "Yes, we did." Sometimes he would say, "No, this is a routine thing that we do all the time; it's not necessary." I would always say, "From now on, I want to see you do a tailgate view." That is behaviour by a senior officer to make sure that safety is a responsible thing.

There is a whole list of things like that that I could tell you. I was once asked, "What kind of goal should we have for serious accidents and fatalities at Ontario Hydro?" In the 1970s and early 1980s, we were having four a year, and around 1987-88, we got it down to one for about two years in a row. Somebody said to me, "That should be our target from now on, to have only one." I said: "If you think I'm going to condone a target where we are willing to accept a fatality a year, you're nuts. We will have zero tolerance."

That's the kind of thing you must do every day. You must be persistent, you must be consistent, and I can tell you that's exactly the kind of attitude that permeated the senior ranks of Ontario Hydro in those days.

**The Chair:** We have time to do another very quick round of about three minutes of questioning. Just before we start, Mr Franklin, I am puzzled by one bit of information we've received over the last 24 hours. As I take a look at the evidence so far that's been entered before the committee, in the backdrop are Mr Maurice Strong's comments yesterday, the impression that at one period of time in Hydro, and certainly under your chairmanship, the budget and the resources expanded significantly. Under the chairmanship and stewardship of Mr Strong, the resources were reduced. So on one hand I have a fattening of Ontario Hydro and on another hand I have the leaning of Ontario Hydro, and in both cases I seem to have Ontario Hydro still in trouble; it's not improving. Can you give some indication of what's going on here?

**Mr Franklin:** I don't have access to the statistics, Mr Shea. As I said earlier in my remarks, once we reached 1990 and we got a two-year licence back from the AECB, I took that as a sign that we had turned things around. The capacity factors climbed back up to, I think it was, 75%, when the average in the world was about 80%. So we were coming back to the world average. I assumed that the plans, when I left Ontario Hydro, had worked. I really can't tell you what transpired after that because I wasn't there.

**The Chair:** Yesterday Mr Strong, in testimony before this committee, gave the impression, and I phrase this in a very delicate fashion, that boards previous to his and chairmen previous to him had less control over Ontario Hydro than he or his board; that it was with his tenure that the wild beast was settled. That was the impression he gave. I confess I think that may give you cause to respond.

**Mr Franklin:** I guess he's looking at it from his own perspective and he's entitled to do that. He wasn't at Ontario Hydro in the times he was making his criticisms so I'm not quite sure how he could determine that.

I can tell you what we did as a governance situation, though, after I got there. We did it not, as I say, because we suddenly saw this pending problem but because, as I became familiar with the utility industry, I went around and saw other nuclear utilities and I saw where there were gaps.

I saw the board of directors, which was 11-strong including myself at the time, wrestling with the technical issues that came before it. We weren't properly comprised. The government of the day responded by putting people of the quality of Dr Kenney-Wallace, who is one of the leading research scientists in Canada in the nuclear physics field, on the board. We already had Dr Runnalls from the University of Toronto, who ran the physics department there. They put on Dr Mathur from the University of Western Ontario. So 30% of the board, not counting me, for the first time had credentials to deal with these things.

It's very difficult to deal with very technical and complex issues in a board, so I set up the technical advisory committee, where every technical program and project went for special scrutiny before it went on to the board of directors. I set up the technical advisory panel on nuclear — I forget the whole thing, but it was Dr Ken Hare, who I understand you're going to see. We established that panel of outside experts to oversee and have freedom to report on anything in the nuclear plant that they wanted to report on, an outside perspective so the board would not be reliant solely on the management that came in.

#### 1150

There was no environmental division in Ontario Hydro at this stage. I set up a division of environmental affairs under a director in the corporate office who was to give oversight to all aspects of our environmental impact, including nuclear, and to issue a public report once a year on the impact of Ontario Hydro's activities on the environment. I spoke already about the peer review program that we set up to make sure we had an outside opinion on that.

There was established, as a result of Chernobyl, a World Association of Nuclear Operators. I took a personal interest. I didn't need another job; I already had two, as chairman and president, but I became the first chairman of the World Association of Nuclear Operators out of the Atlanta centre, to demonstrate to our people that I wanted them to get an international perspective, to be receptive to new ideas. I could go on and on, but to say that there wasn't governance and there wasn't attention is just not true.

**Mr John O'Toole (Durham East):** Thank you very much, Mr Franklin. Very quickly, I just want to dwell on a couple of things. We heard Mr Strong characterize the nuclear division as kind of a nuclear culture, kind of a priesthood attitude. Mr Farlinger moved from a cultural kind of definition to perhaps a little stronger word, "cult." I'm asking for your characterization. What would you call that? Do you refer to the safety culture, or how would you characterize it? I'm not looking for a negative characterization.

**Mr Franklin:** I understand. You can have a safety culture superimposed on almost any other kind of domestic culture you might have in the organization. They're not incompatible. I think I said earlier that I didn't like those terms "cult" and "priesthood." What I did acknowledge was that these people were the highest-skilled, the most-trained, dealing with the most sophisticated technology that Ontario Hydro had to cope with, and they considered themselves to be an élite.

**Mr O'Toole:** I picked that word up from what you had said in your opening remarks, "élite." If I look just prior to and while you were at the helm, there was an AECB report in 1985 at Bruce, I believe, that was quite scathing and that looked at a recovery plan. At that time, the response from the board was that it would take a decade, 1985 to 1995, to actually commit to a turnaround, kind of moving the culture.



During your period, you've told us, the staff there were unable to drink from the fire hose quickly enough. That's the way you sort of said — you just poured the money into it. The Darlington overruns were during your period. That's in my riding. I wouldn't blame you singly for that, but was it part of this inability to turn that elitist attitude around from one of R&D to one of operation and maintenance? I mean that in a positive — you've mentioned that subtly in your comments, the inability to move from highly technical design and research mode and build mode to getting the plants to operate. That decline started in that period. The inability to turn the management team around from however you want to characterize it, from elite to cultist — what was wrong? Was it the changing roles of the board chairs or CEOs? What was wrong?

It seems to me the leadership is the person who walks through the organization —

**The Chair:** Thank you, Mr O'Toole. We'll have to move on. I'll give you a chance for a very brief response, but the question was lengthy.

**Mr Franklin:** I don't know that I have a lot to add to what I've already done in trying to respond to that question. I'm not quite sure I understand the question.

**Mr O'Toole:** How come we couldn't turn it around from being the design-research group to an operate-and-maintain group?

**Mr Franklin:** I don't share that view, because the design and engineering group was entirely separate from the operating group. It didn't report to the same people; it came up through a different chain. They were indeed different cultures, and you certainly wouldn't want to mix the two together. That's why they were kept separate. Maybe they were combined under the decentralization program in 1993; I'm not sure. I don't think that was a factor, that there was full attention on design and engineering and not on the other, because they were quite separate.

**Mr Conway:** Mr Franklin, I want to turn to the future. You've been away from Ontario Hydro now for the better part of six years.

**Mr Franklin:** Almost seven.

**Mr Conway:** You had senior responsibilities there and at another crown corporation. Thinking about policy issues, given your experience and your perspective, what advice would you have to this committee? Given all that you've heard about the troubles at Ontario Hydro, all you know about impending changes to the electricity sector and the importance of this commodity and all those issues, what kinds of policy suggestions might you have for the committee as we look to make recommendations to the government and to the public of this province about the future role for Ontario Hydro?

**Mr Franklin:** There are two things I would address on that. The first is with regard to monopoly versus competition, state ownership or private ownership. I think they're two separate issues, whether you have competition and then who owns the company.

I'm a firm believer in competition. I think it's essential, because it has a lot of advantages to it. I worked for 30 years at Canadian National. Every service we provided

was in competition with somebody across the street, but it was state-owned. It was state-owned because they thought there was a public policy issue reason for it. So to me, competition is absolutely the way to go.

The second issue is whether or not you are state-owned. You have to decide an answer to a very simple question, but it's not a very simple answer to get there. That is, do we need this organization for public policy reasons? If you need it for public policy reasons, then you should have state ownership. If you don't need it for public policy reasons, then you should get out of the business. I think that's where you should be focusing your attention.

**Mr Conway:** What advice would you have for the public of Ontario, given your past experience, on that second question?

**Mr Franklin:** I'll be honest with you, I haven't given it a lot of thought in the last seven years, having been away from Ontario Hydro. I really don't know whether it's still used as an instrument of public policy or not. I do know it was in Elliot Lake; I think it was in Kapuskasing. There are probably other examples of where it was used as an instrument of public policy. Quite frankly, there will be lots of cases where it could be used if you wanted to use it, but it's not absolutely essential that it be that.

**Mr Conway:** Back to competition. Ontario Hydro does business in three areas: generation, transmission and retail. The assumption is, of course, that we can and should have competition on generation. There is a measure of competition, sort of, on the distribution side. What about the competitive framework for the electricity sector, as you see it, into the next generation?

**Mr Franklin:** I think you start with generation, open that up to competition. It may end there, quite frankly. As long as the transmission line and corridor is open for other users, that is all that's really necessary in the transmission, and a single distributor is probably better than trying to have two lines down the back of your home. So I would definitely go into generation, and make sure the transmission grid was open for any user who wanted it.

**The Chair:** Mr Laughren. I apologize, I should have started with you. We'll wind up now with you having the last word.

**Mr Laughren:** That's all right. If that's the worst you do to me, I'll be fine.

Mr Franklin, I made the mistake when these hearings started of reading a book on the history of Hydro, and I've become increasingly frustrated as these hearings have begun and are going on. Hydro is forever in the eye of a storm in this province. We get people like you coming before the committee telling us, "There are very unique problems. The union contract made it very difficult to run Hydro," or "There wasn't enough preventive maintenance going on. That's what led to all the problems." And now your remarkable explanation of the aging of the facilities.

I'm reaching a point where I'm having difficulty putting this all together, and I think there is a cult at Hydro. Do you know where it is? It's in the chairman's office and at the board level; it's not down in the workplace. I don't know what other conclusion I can come to when I look at

the series of events that have occurred with Hydro. You don't even have to go back to the Quebec contracts in the 1930s. Just in the last 10 or 15 years, the problem is there.

I'm asking you out of a sense of frustration, what the hell is going on? We appoint people to these senior positions at Hydro — the chair, the president, the board members — yet we're forever in trouble. Why?

**Mr Franklin:** If I had that, I guess I would write a book.

**Mr Laughren:** Yes, because I'm telling you, I'm getting tired of these excuses.

**Mr Franklin:** Mr Laughren, I do want to say this: I'm not trying to deflect your attention from my tenure at Ontario Hydro a whit. I'm quite prepared to spend all afternoon trying to explain my role there. But you had before you a nuclear expert — I am not one — in Mr Andognini. You have his report, where he describes what the problems are there. In his testimony he told you repeatedly what caused the problems that we're now facing. It was a massive downsizing in 1993 and it was a decentralization program in 1993.

I'm not saying there weren't problems in the prior decade; there were problems in the prior decade. But you either believe your nuclear expert or you don't.

**Mr Laughren:** It's not just the nuclear expert, it's people like you as well, who come before us with reasons why we got into trouble. Don't just point to Mr Andognini. He's not the only one who has tried to explain why problems developed at Hydro.

**Mr Franklin:** But if you take the effects of those two programs and work them through, you can see that you are going to result in exactly the situation —

**Mr Laughren:** There were problems before that, Mr Franklin.

**Mr Franklin:** Of course there were. I'm not suggesting there weren't at all. But we're dealing now in the present and I'm just trying to be helpful, that's all. I'm not trying to deflect your attention from the 1980s at all.

**The Chair:** Mr Franklin, may I thank you very much for attending upon this committee. I hope you'd be prepared to respond to another invitation, if it's necessary. I appreciate your time.

With that, the committee will stand adjourned now until 1300.

*The committee recessed from 1202 to 1306.*

#### SOCIETY OF ONTARIO HYDRO PROFESSIONAL AND ADMINISTRATIVE EMPLOYEES

**The Chair:** We will resume the business of this committee. The first witnesses at this hour are the Society of Ontario Hydro Professional and Administrative Employees, with John Wilson, president, and Leslie Forge, vice-president. I welcome you to the committee.

**Mr John Wilson:** We'd like to thank the select committee for inviting us. I'm John Wilson, the president of the society, and this is Leslie Forge, the vice-president.

The society represents 5,500 engineers, scientists and professionals at Ontario Hydro. We're here to speak about nuclear recovery in the context of Ontario's long-term economic and environmental future. This will entail understanding the market, the competitors and the timing of the transition to competition. In addition to the society's view, we'll be presenting recent poll results that provide the opinion of the people of Ontario on these issues.

We understand that Ontario Hydro has serious problems and requires action to restore all of its nuclear plants to world-class excellence. We've gone on record about performance deficiencies which in hindsight have turned out to be correct but which were not accepted by senior management. We must accept and share some of the responsibility. We pushed hard, but our voice wasn't heard.

This will not happen from now on. We'll do what it takes to make sure that serious issues are dealt with. We've arranged frequent meetings with Bill Farlinger, the Ontario Hydro chair, so that the Hydro board will be aware of our issues and our concerns.

Our relationship with Ontario Hydro is a non-traditional one. We have a 50-year history of cooperation, problem-solving, mediation-arbitration. Our constructive approach to labour relations contributed significantly to Ontario Hydro's success in the past. Failure of the society and Ontario Hydro to work closely and constructively now risks more than not being able to meet the challenge of nuclear recovery. It will cripple our ability to compete in the global marketplace and endanger Ontario's long-term economic and environmental success. We are part of the solution.

Ontario's nuclear recovery must be placed in the context of the province's long-term economic and environmental interests. This reminds me of when I was a boy learning to play chess. The pieces were made of wood. We called the people who made moves that only looked ahead a move or two and not at the final outcome of the game wood pushers. The people of Ontario cannot be wood pushers. Nuclear recovery must take place within the context of competition in the North American electrical industry and within the pressures to reduce greenhouse gas emissions.

Competition is inevitable. The question is not whether to introduce it, but how to introduce it and when. We must make the transition to best position Ontario to compete. Nuclear costs are significant, but the long-term economic and environmental benefits far outweigh the investment.

Why is nuclear recovery a necessary step for Ontario's economy and environment? I'd like to make three points: low cost, greenhouse gas and competitive advantage.

First the cost: Only nuclear recovery can deliver power at such a low cost. Only nuclear recovery can avoid billions in debt and premature decommissioning costs. With nuclear recovery, Ontario Hydro will begin reducing debt significantly within a few years.

The second point, the environmental one: The only way to limit greenhouse gas economically is through nuclear recovery. Using gas to generate electricity will increase our greenhouse gas problems. In addition, nuclear recovery



ery provides Hydro with a competitive edge. With nuclear as part of the generation mix, Hydro can be the lowest-cost generator at the margin, as shown by a Resource Data International study of 32 utilities across the northeastern part of North America. Without nuclear generation, Hydro cannot be competitive.

The primary component of Hydro's cost is debt. The primary component of the competition's cost is fuel. As Hydro's debt drops, its competitive edge increases. Nuclear energy, as I said before, is required for Ontario's long-term economic and environmental benefit. We can't be wood pushers. We must integrate the long-term with the short-term solutions, and this entails understanding the larger context: the nature of competition, the market, the competitors, the timing of the transition to competition.

First, the market: The North American market will decide who supplies our energy. With the arrival of competition, Ontario will no longer control who supplies its needs. When competition is introduced, some of Ontario's market will be lost to foreign and out-of-province suppliers. If Ontario can't compete successfully in the export market and becomes a net importer of electricity, it faces dire economic consequences.

A study by the University of Toronto Institute for Policy Analysis demonstrates what happens if Ontario imports 20% of its electricity. The province will experience significant employment loss, declines in overall economic output, severe worsening of government deficits and dependence on foreign and out-of-province energy supply. In addition in the Ontario market, to ensure customers the lowest-cost electricity with the introduction of competition, all customers should have access to all suppliers, and that includes Ontario Hydro.

Let's look at the competition. What do they look like? Three words: They're big. They're integrated. They're diversified.

First, big: In North America there has been a veritable tidal wave of mergers and takeovers. Our competitors are getting much bigger much faster. Nuclear supplies 60% of Hydro's energy. It plays the primary role when we're competing with people like Enron, Duke Energy, Southern Co and Hydro-Québec. Without nuclear recovery, Hydro doesn't stand a chance.

In addition to being big, our competitors are integrated. They're active in all the functions, from the generation to the light switch, through transmission, through distribution to retail purchase, through consumption. These utilities continue to own and operate all the functions, but they have organizationally separated transmission from other functions. This prevents the independently regulated functions from subsidizing the competitive functions. It also protects all the suppliers from discriminatory treatment.

Hydro-Québec and TransAlta are integrated and also have received wholesale power licences from the Federal Energy Regulatory Commission. They are able to compete in the North American market.

Ontario Hydro is moving to organizationally separate its transmission system.

In addition to the big and integrated attributes of the competitors, we also have diversified. These people increased their competitive edge by moving into other industries, like gas and telecommunications. Hydro-Québec is a good example of diversification. Lucien Bouchard said when Hydro-Québec purchased a controlling stake in Gaz Métropolitain, "Concentration of supply, distribution and transportation of energy into the hands of large consortiums is a worldwide trend, and Hydro-Québec has to keep up with the competition." So should Ontario keep up with the competition.

A strong, integrated Ontario Hydro is our best chance of keeping up with the competition. Breaking up Ontario Hydro will turn us into a third-world province. Being big, being integrated is important. Without Ontario Hydro's nuclear facilities, our competition will dwarf us. Without the mix of hydro-electric, fossil and nuclear we don't have, won't have the efficiency, the reliability or the low rates we must have.

It's not just the society that wants to keep Ontario Hydro intact. A recent Environics poll commissioned by the society and conducted after Ontario Hydro's announcement of nuclear recovery shows that two out of three Ontarians support keeping Ontario Hydro intact to compete effectively with out-of-province suppliers.

Let's talk about timing. To understand the longer term we've looked at the market and we've looked at the competitors. Timing is extremely important. Other jurisdictions have moved to suit their own interests. Ontario should do the same. Timing is of particular importance for managing the debt and positioning Ontario for competitive success.

Ontario Hydro's rate freeze, our big rate advantage relative to US states, the adjacent ones, interconnection constraints, all of those allow us time to be able to time the transition to competition to best suit Ontario. We have the time to rehabilitate and restore Hydro's nuclear stations and the time to reduce debt to a manageable level.

In a recent Environics poll, eight of 10 Ontarians agreed the government should wait until Ontario Hydro has had a chance to rehabilitate and restart its generating stations before large foreign and out-of-province suppliers operate in Ontario. Proper timing means that a stranded asset surcharge that raises electricity rates will not be required. Proper timing means the debt will be paid by normal revenue. Proper timing means we will enhance our competitive edge in the export market.

In addition, simultaneously opening up both the wholesale and retail markets in Ontario will mean that the little guys, the residential users, the remote users, will not be disadvantaged by the major industrial players, the big guys who would otherwise grab the best deals first.

Having looked at nuclear recovery within the context of Ontario's long-term economic and environmental needs, having examined the market, the competitors, the timing to better understand what is required, we now know what we should do. The most important decision that will affect how well the introduction of competition will serve the interests of Ontarians tomorrow is how we deal with

Ontario Hydro's nuclear recovery today. Special interest stakeholders hostile to Ontario Hydro see in the nuclear situation a golden opportunity to discredit nuclear power and to dismember the utility. Dismantling Ontario Hydro is not the answer. Fixing the problem is. Returning all Hydro's nuclear stations to performance excellence is a necessary first step in ensuring long-term economic and environmental benefit to the people of Ontario.

1320

We ask the select committee to move forcefully to safeguard Ontario's economic and environmental future by (1) supporting a return to excellence of all Hydro's nuclear stations as an integral part of the transition to competition; (2) recommending that all of Ontario Hydro's reactors be rehabilitated and restarted before large foreign and out-of-province suppliers provide electricity in Ontario — as supported by eight out of 10 people in Ontario; and (3) ensuring that Ontario Hydro remains a single integrated utility during nuclear recovery and, as agreed to by two of three Ontarians, that it remains intact to compete successfully against large integrated and diversified foreign and out-of-province utilities in the North American market.

The society thanks the select committee for the opportunity of making this submission and welcomes your questions.

**Mr Kwinter:** Yesterday when Maurice Strong was here, one of his statements I found really interesting was that Ontario Hydro actually believes that nuclear energy is low-cost. When I questioned him on it, he said they have no idea whatsoever what it costs to produce this nuclear power, and in his opinion it isn't really low-cost energy. In your statement, you say that only nuclear generation can deliver the required amount of power for as low a cost. Do you have any comments on his statement to us yesterday?

**Mr Wilson:** What I said in my statement is that only nuclear recovery can deliver the energy at such a low cost, and that is a true statement. What we're talking about here is a small investment to recoup a large amount of power that otherwise would be lost to the people of Ontario.

The other point I made was that if we don't make this small investment for a big return later — granted, it's significant, but let's look down the road — we're not going to be in the business as a big player. It's not just a question of looking at nuclear power in isolation; it's a question of looking at Ontario in total.

There isn't to my knowledge anywhere else that you can make an investment of the size we're talking about and get a return like we're talking about in terms of both the environmentally friendly power we get back, in terms of no increased greenhouse gas emission, and also the fact that the province doesn't just stay in the business of producing electricity but has an economy that doesn't remove from it billions of dollars that walk out into Quebec and into the States.

That's the message we have today. We have two messages for the select committee. One is that when you make a decision on nuclear recovery, look down the road and say, "Okay, how does this fit in with the game plan?" —

you're looking at a move in front of you — "How does this fit in with the big picture?" The second key message: We have recently polled the people of Ontario and we'll get those results to you. We actually don't have the poll. We have two numbers right now, and when Environics puts them together we'll walk it up here. It says the people of Ontario want the space to recover eight of 10 of Ontario Hydro's nuclear reactors before competition begins. So I think it's a step back kind of thing. It's not, is nuclear recovery or nuclear power a good thing or a bad thing? It's, is it a good or bad thing for Ontario?

**Mr Kwinter:** When Mr Andognini was here we asked him what this is going to cost, and the range is anywhere from \$5 billion to \$9 billion, but it doesn't include certain costs he hasn't quite determined yet. He said he is still trying to get a handle on the total problem. When you talk about this relatively low cost, this \$5 billion to \$9 billion or \$12 billion — there are all kinds of figures out — is that what you consider to be a low cost?

**Mr Wilson:** The words I think I said are that the cost is significant. It's not small change. It is significant, but you can't assess the cost unless you look at the benefit, the other side of the equation, so it's a question of what you get.

Most of the money that Mr Andognini was talking about goes for replacement power. Those costs will be there no matter what decision is made, to restore the plants or not restore the plants. The actual money that Mr Andognini is looking at is somewhere between \$1 billion and \$2 billion. That's his program as costed by Ontario Hydro. That's the order of magnitude we're looking at here. You can't get around the replacement power cost. That's there. That's a cost that has to be spent for Ontario. Again I say step back and don't focus on: "Is nuclear power good? Is it bad?" I say the answer to that question is decided by what it does for Ontario.

**Mr Kwinter:** What I'm having some problem with is when you try to differentiate between what it does for Ontario and what it does for the power user. Throughout your presentation I get the impression that if it was left to the competitive free market, Ontario Hydro would be swallowed up by these mega-companies in the United States that would come in and Ontario Hydro could not compete. That, to me, is a strange concept, because it would seem to me that the major thrust of what we should be doing is to make sure we have security of supply and that we have as economic an energy source as we possibly can.

Quite frankly, what we have been hearing over the last few weeks is that Ontario Hydro is having problems delivering to those two criteria, and you're suggesting that notwithstanding that and notwithstanding any of the competitive forces out there, it's absolutely critical to the wellbeing of Ontario that we own this facility and that others be kept out, other than in certain areas where you say you don't mind some competition.

**Mr Wilson:** Let me try my message again. Maybe I wasn't very clear there. I'd like to make two points. Number one, I referred to a Resource Data International study



of all 32 utilities on this part of the continent, the northeast part of North America. In that study Ontario Hydro was the lowest ranked, at the margin, for cost of electricity. Can Ontario Hydro compete? Yes.

The other point I was trying to make is that for Hydro to compete successfully, it has to be done the right way, and that's allowing the reactors to be put back in, recovered and brought up to world standards. When Ontario Hydro is in that situation, it is one of the most competitive utilities in this area of the continent. Again, that's another point that was supported by the poll we did. Eight out of 10 people in Ontario believe that's what should happen. We're not talking about eliminating competition.

We're not saying that Ontario Hydro can't compete. We're saying that Ontario Hydro can compete, and we're asking the select committee to do it so as to best benefit the province. Allow the proper timing, allow the rehabilitation to take place, and then, according to what we have looked at, the studies we have looked at, Ontario Hydro is one of the best competitors, and that benefits the province. It's the other point I made. If billions of dollars leave this province when energy is pumped in from Hydro-Québec and from the States, somebody, and I would say Ontario Hydro, had better be picking up a big part of the export market. If that doesn't happen, it's not just Ontario Hydro that has a problem. It's Ontario that has a problem.

**Mr Conway:** I want to deal with an area of this question that you didn't deal with. I apologize for missing part of the presentation, but you make a very strong presentation, as I would expect the society to make, and you highlight a point of view that I would have expected, which is also to your credit.

One of the areas that people like myself are having a problem with is what kind of culture, what kind of milieu has allowed the difficulties you point to in the early part of your presentation to develop. I'm coming to the point where I say to myself that we have to change this regulatory environment. I don't think you are going to get some of the behavioural modification unless and until we have a different regulatory framework, even accepting that at the end of the day we have your kind of provincial utility. What are the views of the society about a new or changed regulatory environment for the electricity sector, looking into the future?

**Mr Wilson:** It's our view that it's going to happen, and there's no way it's not going to happen, so what we can do is say how it happens. By saying how it happens, we'll determine whether we are still in the game.

1330

**Mr Conway:** Maybe I'm not making myself clear. Let's assume for the sake of argument that we're going to continue with the significant public enterprise that is Ontario Hydro. There are some — and I'm not so sure I'm not now in this category myself — who believe, "All right, that beast is going to have certain corporate instincts that are not always going to be the ones that are advertised or are in the public interest, so we're going to need what we've never had before." We've not only had a public

enterprise called Hydro. It's been a monopoly, but it has been unregulated.

I, for one, am coming to believe that a big part of the problem is the fact that it's not just — some people would have you believe the problem is that it was a state-owned enterprise. I'm not so sure the problem was not more on the other side, that you had an enterprise that was unregulated, save and except for a bunch of politicians who are always vulnerable because the commodity at issue was electricity. A more political commodity is hard to imagine. What I want you to tell me is, do you think the time has come for a much clearer, much more independent, much more tough-minded regulation of the electricity sector?

**Mr Wilson:** As I said, competition is coming. That means the monopoly is gone. It means that independent regulation is here when and how we phase it in. It's a given that we're going to have independent regulation. That will occur with competition. What we have is a choice: How do we make it happen? When do we make it happen?

**Mr Laughren:** Mr Wilson, you may be right in your assertion that the nuclear recovery option is the one that's the best for Ontario, but I don't know how the hell you know that. I sure don't and I don't know how anybody else knows either. Who has done the work to say that's the option? The Hydro board never had a look at options. Maybe you have. I don't know. I've never seen any options to what Mr Andognini laid before the board and made a decision on the same day. I don't know how anybody knows this is the best option.

You have a faith in nuclear, and that's your life and the life of your society, so I understand that. I'm not being critical of you for that, but I don't know how anyone knows that's the best option. I really don't. I desperately would like to know if that's the case. I'd appreciate some indication from you of whence you derive such faith.

**Mr Wilson:** It's not just faith. We have looked at the numbers and we've looked at the studies. Let me take this in two phases.

**Mr Laughren:** Excuse me, but what numbers and what studies?

**Mr Wilson:** Let me answer your question in two parts. The first question is, do we need nuclear recovery for Ontario to survive? Those are the kinds of studies we looked at that I quoted. We can give you some today. We can supply as many as you want of those studies that say that if the province doesn't have a well-functioning nuclear part in Ontario Hydro, there's big trouble.

There's a second level to your question. Maybe that's the one you want the answer to: Do I know, does the society know that Ontario Hydro is recovering its nuclear stations in the best possible way? I don't have that information. I don't know if the nuclear recovery that Ontario Hydro has planned is the best. Those are the facts and figures I don't have my hands on. I would like to get my hands on the economics of the study, similar to the way the society demanded that Mr Macdonald produce the economic studies that said he had the answers. I would

love to see the facts and figures that point to the way Ontario Hydro is doing it as the best way.

I can't say what they're doing is the ultimate best way, but what I can say is that if we don't have nuclear recovery of some kind and if we don't get those stations back and working, we're going to walk away, for the most part, from the electricity business in this province. That is a bad thing for Ontario, from the big studies I've looked at and referred to.

**Mr Laughren:** Who's going to walk away?

**Mr Wilson:** Go back to a point I made that says, when we open up to competition, some of the energy in this province is going to come from outside. The market is going to be eaten into. That means \$1 billion or \$2 billion is going to walk away from here every year, and all of the spinoff that goes with it. If we can't pick up something outside, if we can't pick up that market share outside, Ontario is going to suffer. Those are the kinds of studies, and we can show you what will happen when that happens.

We also know that to be a big player and to compete outside and to fight with Enron and Duke and Southern and Hydro-Québec, you've got to have very low cost, you have to have a fuel mix that makes you efficient etc. The only place in Ontario where I can see that is Ontario Hydro.

**Mr Laughren:** My phone has been ringing, since this committee began its deliberations, from people who say: "Don't let the same people who got you here lead you into the future. There are alternative sources of energy and we're prepared to deliver them and it's largely the gas turbines." I don't know. I'm a layperson in this whole field, but there's a lineup of people out there who want to ease the burden on Ontario Hydro who claim the ratepayers in the province — what is annoying me immensely since we began these deliberations is the fact that there's no information for us. We're making a decision in a vacuum.

Second, we have the government, which has been sitting on a white paper of where we're heading with energy, and they won't give it to us. For the life of me, I don't know how we can seriously deliberate where we go with energy in this province until we know that. I don't know whether you have any advice for us on how we make these decisions — which I think are important, the recommendations, at least — and intelligent recommendations without having all this other information either on the alternatives for recovery or the white paper. Do you have any advice for us?

**Mr Wilson:** I think you need to know what the province is going to do, and that's the point I've been making, in order to make this call. You have to know the big, long-term game plan in order to make the move on nuclear recovery. I think there's some room for the select committee to help the government and respond to the people of Ontario, eight out of 10 of whom want things to happen, to say that the recovery has to take place prior to opening the floodgates to the people from outside; to say that the recovery has to take place with an intact Ontario Hydro that has the support of hydroelectric; to say that if those things

hadn't been there, we'd be paying today. I'm talking about long-term, big costs. There's a short-term cost today. If the government had made moves a year ago this situation, which is arguably bad, would be catastrophic.

I think the select committee does have places to go and it can recommend to the government that the nuclear recovery is important enough that it has to have two things: It has to have the time to occur and it has to have an Ontario Hydro that's a single piece. I think that'll help the government with its white paper because the government also wants success. We're not talking about a level market here. We're talking about a place where Ontario isn't a loser but a winner. I think there are things the select committee can do and it's my opinion that you don't have alternatives.

You're right, combined-cycle gas: You listened to Mr Andognini say that the best combined-cycle gas on the market won't come near to rehabbing the Bruce station, which was the highest-cost station he looked at. Wind and solar power: You can look to California if you want to see a wind farm that covers an area that makes the Parliament area here look very, very small and supplies virtually nothing in terms of what the city of Los Angeles needs. You don't have places to go that are safe for the people. You only have one answer, but I'm not saying your task is easy, because how you do that will make or break this province. I think there are things the select committee can do. If you move with the recommendations we asked for, you'll have done a great service for the people.

**Mr Galt:** I have to warn you, Mr Wilson, that I'm extremely disappointed in your presentation. You essentially have presented us with the status quo, which I can assure you is not satisfactory. We've heard from several presenters. We've heard from Mr Strong, who declared it was in crisis when he came into office. He more recently talked about a nuclear culture and the problem. We've heard from Franklin and how he improved it while he was there. We've heard from Murphy and the problems of the union and how great they are and how they volunteered their time to look after the heavy water plant etc. We've heard from Andognini that they do not have an authoritarian enough management style. From what I've read I would suggest it has been too authoritarian, and maybe you people have been the filter going up and coming down that has messed up this authoritarian style that Andognini is referring to.

**1340**

As I read through what has been going on in the 1980s and into the 1990s, I'm sure if you'd brought in the Clampett family, they could have improved management considerably compared to what I'm reading about what has been going on in Ontario Hydro. I looked at your speech and I kept looking at the bottom to see what year in the 1960s it had been written, because what you're talking about is the status quo of what was being recommended at that time — totally unsatisfactory.

We had the Power Workers here this morning, who at least had some suggestions and some ideas on how we might relook at this recovery plan. But I look at your four



points here, and they're all status quo. I just don't know how you have the gall to come before us to talk about the status quo, which hasn't worked. We're now over \$30 billion in debt, 80% has been brought on by nuclear, and you're recommending we continue. Please explain.

1340

**Mr Wilson:** I think there's a subtle difference in the word Mr Andognini was talking about, between "authoritarian" and "authoritative." He was saying that we needed to be more authoritative, we needed a management culture that provided direction to people and that was accountable. You're right, Mr Galt, I agree with you that we don't need an autocratic situation where we have people who are afraid to speak up and say there's a problem here. We definitely don't need that. We've had enough of that. We admit there were problems.

**Mr Galt:** Were you the management group that filtered that out and wouldn't let it up to the top?

**Mr Wilson:** No, we're not the management group. We are the scientists, the engineers, the professionals. We perform the studies. We are directed by the management group. We do the pieces and parts that management puts together and then makes the call on.

**Mr Galt:** May I interrupt for a second? It says "Hydro professional and administrative employees." That has nothing to do with management?

**Mr Wilson:** That's correct, sir. We cannot be management. We are engineers, scientists, people who look at financial studies etc.

**Mr Galt:** We've also been told that we're over-engineered and undermanaged.

**Mr Wilson:** I think Mr Andognini — I don't want to put words in his mouth — is talking about management accountability there and trying to say that we really don't need to substitute technical solutions; what we need is to change the management culture inside Ontario Hydro, and we need to bring about a culture that is accountable and provides direction. I think he specifically referred to himself in testimony before the select committee as saying that that's a problem, where people think they can substitute a technical solution for a well-managed business.

When you're talking about your being \$30 billion in debt, the suggestion I brought —

**Mrs Johns:** The taxpayers are \$30 billion in debt.

**Mr Wilson:** Whatever; all of our \$30 billion in debt that we're talking about. There's only one way out of this situation that won't increase that debt, that won't eliminate or reduce radically the revenue stream to pay that debt down, and that's not to walk away from the revenue stream, it's not to decommission reactors prematurely; it's to get the money back from the investment that the people of Ontario put in.

**Mr Galt:** That's how we're there. Tell me how the plant that you people, as professionals, were responsible for at Darlington went from something like \$3 billion to \$4 billion to \$14 billion. I gather, since that's not management, you're the professional people who were overseeing that. How did that happen?

**Mr Wilson:** What you're referring to is what Mr Andognini said would be substituting engineering for management. I think the people who are accountable for making things happen are the management. Our people perform the services. They're told to make this happen, make that happen, engineer this, engineer that.

**Mr Galt:** It went from \$4 billion to \$14 billion.

**Mr Wilson:** That may be.

**Mr Galt:** At that time, I gather it must have been coming from the professional group recommending that we build another 16 reactors, when we were into the mess with that development and at that time efficiency was dropping off because of concern for safety. Can you explain that?

**Mr Wilson:** The professionals at Ontario Hydro do not make recommendations on building another 16 reactors. Management makes that call. We provide the information we're requested to provide in terms of, "Is it feasible to do this? How can this be done?" That goes into the management group, as it should, and the call is made to move ahead or not move ahead.

I think you're confusing the people who are doing the work and performing the studies with the people who should be making the calls and being held accountable. Mr Andognini said that this confusion existed at Ontario Hydro, and that's one of the things he's setting out to eliminate, to say that the management people will be accountable and we won't have to look at situations like we looked at in the past, and the society supports that.

**Mr Galt:** You're telling me you've made all the right recommendations to management and they haven't responded.

**Ms Leslie Forge:** I want to take us back to your comment, your accusation actually, about the status quo. We very much are looking at a very new environment here, the competitive environment that is going to be at our doorstep shortly. You mentioned the status quo. I was intrigued that you mentioned the 1960s. I might more readily take you back to the origin of Ontario Hydro itself under the Conservative government and back to Sir Adam Beck's day, if you want to talk about going back, because we're more similar in that sense. At that point, they were looking to introduce something to the electricity system which would benefit the people of Ontario. That is where we are at. We're looking at and asking the committee to examine the long range for the province and what is in the best interests of the people of Ontario. So we go further back than 1960.

**Mr Galt:** Still, the status quo is what you're telling us with nuclear; you're not telling us something new, how to develop, how to do something with this recovery plan, other than that the status quo is great. But \$30 billion is not great.

**Ms Forge:** Actually, thank you for that expansion, because it actually helps to feed into the question Mr Laughren asked about the nuclear. We don't come with ready-made answers and pretend to know everything. One of the parts of our training as professionals is to be open, to look at the options and to look at the information. We

are not wedded purely to one technology. We represent members that are active in all technologies, nuclear included. We believe we should be looking at options for Ontario, but they have to be in the economic long-range interests of the people of Ontario. The simple economics of nuclear, the move-forward costs of nuclear, convince us of the wisdom of ensuring that we bring back nuclear generation as quickly as possible.

**Mr Wilson:** I think Leslie is saying too that there's a huge investment that has already occurred in nuclear. What we're talking about is spending a significant, but small in comparison to the benefit, amount of money in addition to that. The question is, what can we get back? Money has been spent; there is a debt. We're talking about spending some more and seeing if we can get the revenue stream that will pay for that debt and at the same time end up with a competitive animal that will be able to play and compete against Hydro-Québec, that will be able to play and compete against Enron and Southern, because competition is coming. We're not talking about the status quo. There is no choice here for Ontario in terms of competition. The choice Ontario has is, how do we bring it about?

**Mr Galt:** Obviously you have a different opinion on status quo than I do. The current chair referred to this as a cult. The previous chair referred to it as a nuclear culture and a crisis. Are you part of this cult, of this nuclear culture?

**Mr Wilson:** The people who worked at Ontario Hydro have problems, and you would have problems too if you worked under a management group that was unable to provide adequate direction and that was not accountable. What we're doing is sitting down with Ontario Hydro and saying, "We can do this, and we can do this well; and we have evidence that we can do it, because we were there." Ontario Hydro was there; the society was there.

This is a world-class organization. As Mr Andognini pointed to, there was some dizziness due to success. People thought they were the best, and they forgot how they became the best, how they had to work together, how they had to try. So we've got evidence that we can do it. This isn't speculation. It has been done.

Yes, there are problems. That's what I said in the beginning. We admit there are problems. The society pointed to some of these problems. We tried to make them known. We didn't push hard enough. We didn't push high enough. We've gone out, and I've sat down with Mr Farlinger and said: "I'll meet with you on a frequent basis. When we have concerns and issues, it'll be there. What happened before is never going to happen again. The Ontario Hydro board will know what's going on in the corporation."

**Mr Galt:** An awful lot of your presentation seemed to be hinging on the Environics poll and the position you were or were not in in connection with that. How much of an effect do you think the multimillion-dollar campaign of the Power Workers had on the public in Ontario, showing pictures of Niagara Falls and indicating or at least suggesting that Niagara Falls, water falling over a hill, was going to be sold, not the plant? Did that not have an effect

on the poll they would have carried out prior to August 12, 1997?

**Mr Laughren:** Mention Mr Farlinger's ads.

**Mr Wilson:** I'm not here to speculate. That's not the kind of tack we're taking. The reason we did the poll was because we didn't know where the people of Ontario were. We did this poll after the announcement was made that nuclear recovery was required. We asked people, "Should this recovery take place prior to opening the floodgates?" Eight out of 10 people in this province — and this is a long time since the Power Workers ran their big ad — said, "Yes, Ontario Hydro should have the time to be able to play against the big people from outside."

I'm not here to speculate. That's not why I'm in front of you. I'm here to provide you with the factual information that I have, and the factual information says that the people of Ontario have an opinion on this. As I said, next week we will walk this up there, when we get the poll from Environics, and give it you. We'll be happy to sit down with you and go through it a piece at a time.

1350

**Mr Kwinter:** I have some serious problems with what is going on. We have a situation where everybody who comes before us who represents the board or management says: "There is this culture, there is this cult, there is this priesthood, whatever it is. There are people who are running this operation, who, because of the very nature of it, are really the leaders."

Maurice Strong said he could walk around the nuclear reactor plant forever and not understand it; he doesn't have the training. Yet he's in a position where he has to make some decisions.

In your statement you're saying, "We were too silent, we were too reactive and we were too comfortable with the notion that it's up to management to deal with the problems."

It would seem to me that when you have a situation where the management does not have an expertise or a knowledge of what is happening, it's almost impossible for them to deal with the problems. All they can do is deal with the results of the problems.

Your association and your members are the so-called resident experts. You're the guys who have control of the facility. You're the ones who have to be accountable. I'm not being critical, I'm just saying that we have this situation where there's a real divergence, where the guys who are calling the shots have no idea of what is involved in calling the shots, all they can do is be reactive.

You say that you have been too reactive, so somewhere there's a void. There's a huge void in there when nobody is running this thing, because there isn't some bridge where there's somebody calling the shots who knows what shots to call. All they can do is react, as we have seen at the board meeting on the 12th, where suddenly: "Here's a plan. Okay, what do we know? This is what the guys say we should be doing. Let's do it." Do you have any comments on that?

**Mr Wilson:** Yes, I have a lot of comments on that. I don't think there is any hole in terms of what's supposed



to happen. What's supposed to happen is our people are supposed to provide the information that they're requested to supply to the management people, who are supposed to look at the big, overall picture — the technical information they get from this group of people, the financial information that our financial people provide, the research information that our scientists provide. They're supposed to put it together and they're supposed to say, "Okay, how do we weigh out these three options?" Then management people are supposed to do what they're paid to do. They're supposed to make the call and manage and be accountable for the call they made and not push it, as Mr Andognini said, down into the technical area and say, "There's where the responsibility is." We agree with Mr Andognini's assessment of where the accountability sits for the operation: Management is responsible for the plant.

And you're right, to go back to the fact it looks a little different. What are we saying? We didn't push hard enough? We began to understand that there were some problems with how this was being done, that there was a management problem, and we began to detail here and there, "There's a performance deficiency here, there's one here," and we would take it up the line and say, "There's some trouble here, there's some trouble there."

We didn't get the action that we wanted. We pushed but we didn't push hard enough. What I'm here to say is that's not going to happen again. We will push all the way. It's not our job to make the calls. It's our job to provide the information. But when we see there's a problem with the calls that are being made, we're going to speak up and this time we will yell as loud as we have to yell until we get the attention that we need to get.

**Mr Kwinter:** I sit on a few boards and I can tell you that I don't try to micromanage the company, that's not my role, but I have to take it as a given that if the professionals tell me something, I either have faith in them or I get rid of them. But if I have faith in them, I act on their information.

It would seem to me that somewhere along the line we have a credibility problem, because on the one hand we have these people who say, "We are the best," and the results of the Atomic Energy Control Board's findings over the years have indicated that you're not the best. You may be the best in designing the equipment, but you sure weren't the best in maintaining it and operating it. Somewhere along the line there's got to be some accountability. When I read that you're saying it's up to management to deal with the problems, I don't understand, given that this is a lay board — there may be a couple of people on it who are experts, but by and large it is a lay board. These are people who are supposed to protect the public interest but have to depend on the competent professionals who are giving them the information on which they can make a decision. I think that is where this thing has broken down.

**Mr Wilson:** I think you're right, because what happens is, at least at Ontario Hydro, senior management feeds information to the board of directors. It's not technical people. Senior management provide the options and they explain that they have assessed here, they've gone to some

technical people over here and they've got the engineering criteria for this one and this one and this one and they've gone to some finance people over here and they've got the economic costs of all the options, and then senior management at Ontario Hydro sits down and says, "We recommend that this is the way to go," and then they go to the board.

You're right, everybody has to deal with the problems that are there and everybody has to deal with their part of the problems. It's the board's part to set the policy, to point the direction, and it's senior management's accountability to come up with the calls and the recommendations, based on the work that our people do getting the information, providing technical expertise, providing financial expertise.

You're exactly right: If everybody performed their role and if everybody fulfilled the parts that they are responsible for, the problem wouldn't be there. There is a problem now and that's because there is a lack of responsibility. The people we have seen in the IIPA, Mr Andognini's report — it's his assessment that management is not providing what is required.

As I said, even though we're not in the business of making those decisions, the society noticed that there were some problems and we tried to take those problems upstairs. Unfortunately, we took them to the senior management people, maybe, who were the problem. We now have set up a path to the board, so when you sit on that board, you will get our issues and our concerns. It'll be in the room. Mr Farlinger will know how we feel and what's there. We've set up a system to circumvent a bad situation. I hope we don't have to circumvent it. As I understand it, Mr Andognini and the Hydro board are changing the management structure and that culture will change.

**The Chair:** Mr Laughren, about a minute and a half each. I'm going around one more time.

**Mr Laughren:** There seems to be a certain amount of revisionist analysis going on here this afternoon. I always thought that you blamed the people who give the orders, not the ones who take them, when major problems occur. Yet here, especially Mr Galt seems to be thinking that it's the workers who are to blame for this whole thing.

Correct me if I'm wrong here, Mr Wilson, but surely to goodness, the people to whom your group reports — I don't know the organizational structure — have experts as well. All the experts are not resident in the society, are they? Does management not have experts who know and understand the way in which nuclear plants operate?

**Mr Wilson:** That's exactly right, Mr Laughren. At the lower levels of management, and there are several levels of management between the society and the Hydro board, there are people who have an in-depth technical understanding, financial understanding about nuclear power, about fossil, about hydroelectric. As you move up in the management level, the understanding becomes more general and less technical. But certainly at the first levels of management there are people with very good and excellent technical background.

**Mr Laughren:** I have never in all my days seen such downloading of responsibilities as I've witnessed in this committee in the last week. It is truly remarkable. It's true. The past chairs come here, debate it. The only person I remember assuming responsibility was Mr Kupcis, who packed it in. He said: "The responsibility is mine. I'm out of here."

Others are saying, "No, no, it's the union contract," or, "It's the aging process." They always found somebody to blame for the problem. I am very sceptical about some of the stories that we're hearing before this committee.

1400

**Mr O'Toole:** I just want to make a couple of points and then I'm going to give my time over to Ms Fisher.

I think there are really two monopolies in operation here. One is the monopoly of knowledge and the other is the monopoly of the nuclear option.

But I put it to you that it's the structural problems, the organizational and communications problems that I see after your presentation. We've got the Power Workers, which Floyd has recognized as at the bottom of this pyramid; then we've got the technical staff, the professional staff — that's you. Neither one of those are responsible. That's what you said. We've got the management staff, and they don't seem to be responsible. At least Ms Clitheroe and Fox and the other high-level people said, "It all happened before it got to us." Then we've got the board, and the board has had several cultural, cult kinds of definitions. "Élitist" is another word that's been used.

One thing you said is, "It will never happen again." I put it to you that if you don't learn from history, you are doomed to repeat it. That's the confidence interval that I put to you.

Ms Fisher, I would ask if you have a more specific question.

**Mrs Fisher:** I actually do. It follows up on the one that was asked this morning by the other representatives of the major part of the workforce at Ontario Hydro. I guess it goes like this: There was a plan put before us by management through the board. There is a plan that was put to us by the Power Workers' Union this morning. There is a reflection — and I hate to be so rude — of the status of Ontario Hydro today by yourselves now. I would like to suggest that there's nothing in this that talks to and addresses the issue of the major findings of the IIPA, and that was the human resource problem, which has further come to be known as a cultural problem and all those other words that Mr O'Toole just used.

I am very disappointed that you didn't come forward and address the IIPA. I would like to ask you, as the leader of a major group of employees of Ontario Hydro, where is your plan? Tell me how in your document I can find the answer to the culture problem. That problem, as Mr Andognini reflected on, is the difference of opinion between labour and management. You can't have it both ways. You can't say: "We're in the middle. We didn't screen it without having an effect. We made recommendations but weren't heard. We have a workforce on the floor that is trying to be something but isn't."

We have the AECB chair telling us, "It's minimally safe; at risk sometimes." Could you please explain to me what your answer to this culture problem is and what you propose to Mr Andognini and Mr Farlinger other than just meeting with them once a month?

**Mr Wilson:** Let me go back, because your question and Mr O'Toole's question are very similar when you draw the little pyramid and you put the various people in the various strata of the pyramid. I didn't say that one stratum or another wasn't responsible; what I said was they had different responsibilities. The board has a responsibility — it's like my answer to Mr Kwinter — the management people have a responsibility, the technical people and the hands-on people, and they're different. We are attempting to deal with what's come out of the IIPA, and that's what I said when I came in here. There are serious problems.

I mentioned just one way in which we're going to try to get information into the Hydro board. We're sitting down with Ontario Hydro nuclear now, with the people that Mr Andognini has brought in, with the management people who are there, to attempt to address the culture situation, as you call it, that's going on.

**Mrs Fisher:** What are you doing, though?

**The Chair:** Mrs Fisher, thank you.

**Ms Forge:** Can we also have the opportunity to answer John O'Toole?

**The Chair:** Very quickly, a response.

**Ms Forge:** It is quick because I can use a quote from the CEO of Duke Energy, a recently amalgamated utility in the United States, who said, "History shows that companies whose nuclear plants fail miserably often bounce back better than ever." You were referring to history.

**The Chair:** Just before you go, there is one troubling aspect of the testimony. May I just ask you to clarify it for me? In questioning from the government caucus and from the opposition parties, we've talked about this layering of human resources at Ontario Hydro. It's been stylized in words of the "management group." It has been stylized as the "resident experts" at another level, as a different layer. I pause for a moment to make sure you are with me. Do you follow where I'm at so far? Yes or no?

**Mr Wilson:** I'm not sure where you're going. I think I understand.

**The Chair:** I don't want you to know where I'm going; do you know where I am right now? Do you agree with that so far?

**Mr Wilson:** Yes, that there are various strata.

**The Chair:** There seem to be these two layers we've talked about so far. If you represent the resident experts, would it be reasonable for me to assume that it is from your group that the elements that constructed the recovery plan would have emerged?

**Mr Wilson:** My answer to that would be that some of the people in our group were involved in putting together some of the pieces. As Mr Andognini said, he had a team of many people who did the work. Let me separate it into two pieces. There is the assessment of the problem, the IIPA. We had people who worked with Mr Andognini and



his group. When you're talking about the recovery, the plan and the basis for the plan, which I haven't seen to date, we had people, undoubtedly, who provided information. We didn't have people who were involved in putting it together. So we had people who provided financial information and technical information, because it's impossible for Ontario Hydro to come up with that kind of plan and not have input from our people, but we didn't have people who assembled the plan. In total, do we have people who are aware of the recovery plan? The answer is no.

**The Chair:** So I had a little bit of white smoke coming up over here and a little bit of white smoke coming up here and a little bit of white smoke here, but it wasn't all coming together from that group. Is that what you're saying?

**Mr Wilson:** That's correct. We noticed there was some white smoke here and some white smoke there and we went to Ontario Hydro, as we have in the past, and said, "We think there's a problem."

**The Chair:** Thank you very kindly for attending the committee. We appreciate your time.

1410

JAMES BULLOCK  
DAVID KERR

**The Chair:** The next witnesses before the committee are the Ontario Hydro board members James Bullock and David Kerr. Would they be good enough to approach the committee. Welcome to the committee. We appreciate your acceptance of the invitation.

**Mr Jim Bullock:** I'm Jim Bullock. My day job is president and CEO of Laidlaw Inc, and I'm a member of the Ontario Hydro board, having been appointed in July 1997. I did not come prepared with an opening comment for you, but I thought I'd be here to try and shed whatever light or provide whatever assistance I might to your deliberations.

**Mr David Kerr:** I am David Kerr. I'm the chairman and chief executive officer of Noranda. I've been on the board of Hydro since mid-1993. Like Mr Bullock, I didn't come with any prepared comments.

**The Chair:** We will proceed. We began the last round with the Liberals. We'll begin this time with Mr Laughren.

**Mr Laughren:** Welcome to the committee, gentlemen. It's good to see you again. I say that as though we've spent a lot of time together.

Mr Bullock, I appreciate the fact that you've only been on the board a couple of months, right?

**Mr Bullock:** That's correct.

**Mr Laughren:** And Mr Kerr has been on it for about four years, which is a nice mix of experience.

What's bothering me, and I suspect other members of the committee will speak for themselves, and I'll go right to the heart of the matter, is the August 12 board meeting at which there was put before you Mr Farlinger's plan and also, I believe, the recovery plan flowing from that.

It's been quite startling for some of us to learn that you basically may have seen that report on the Friday before but made the decision in that one-day meeting on the 12th. Is that correct?

**Mr Bullock:** Perhaps I can start. The report itself, the IIPA report, was delivered to me late in the week prior to the board meeting. It's certainly voluminous. There are some 15 documents contained in that report. I recall spending most of my August weekend reading that report and trying to get a sense of it. Then we had our meeting early in the week of August 11 or 12.

In your preamble, Mr Laughren, you suggested Mr Farlinger's plan and then the IIPA report. As I recall, the sequence of events was that we received the recommendations of Dr Andognini and his team, and those were presented over a three- or four-hour time frame in the meeting. Several members of the board, myself included, asked a number of questions. The decision that was reached that day, in my view from the board's perspective, was an acknowledgment that the status quo with respect to the nuclear facilities of Hydro was unacceptable and that Dr Andognini had laid before us a recovery plan that, directionally, I was comfortable with, but there remained a number of questions with respect to the costs associated with many of the options.

The board, myself included, asked for further information. If you look at the plan, it's got some flexibility in it going down the road. As a board member, it would be my view that we would be challenging the progress of that plan on a monthly basis and examining the financial options as they came forward. By way of example, if we were going to make a decision to spend the money to restart Pickering A or the Bruce facilities, as a board, I think you measure the costs associated with that with the alternatives at the time, which is a couple of years out, and you also obviously measure it against the progress being made by the recovery process in the remaining 12 facilities.

So it was very much setting the course for the recovery of the nuclear facilities, but that was to be a process that would be followed by the board receiving monthly reports and requests for expenditures as we went along. The actual expenditures approved that morning to start down that road were the ones associated with the balance of calendar year 1997.

**Mr Laughren:** The what?

**Mr Bullock:** Were the expenditures associated with the balance of calendar year 1997, which, while not insignificant, were relatively minor compared to the cost of the overall plan.

I felt that the board had to take action. We've since received a sizable amount of information from Dr Andognini and his team and others within Hydro and I think the decision we made then is still the correct one.

**Mr Laughren:** On that day did you have any sense that — either one of you, please jump in — you were not given an array of options, that rather you were only given one option, basically?

**Mr Bullock:** There was discussion that morning centered around the need to close or shut down one third of the facilities while corrective action was taken on the two thirds and what the options were surrounding that. As I recall, other board members and myself asked for additional information in that regard to flow from the meeting, and it has. There was in due course, actually, documentation of details of six options; the one we chose still remains the preferred option.

**Mr Laughren:** At that meeting, do you recall seeing the letter from the Minister of Energy, Mr Sterling?

**Mr Bullock:** I recall — do you have the letter?

**Mr Laughren:** The letter dated the previous day, August 11.

**Mr Bullock:** Yes, I have it here now. I don't recall seeing this at the meeting, Mr Laughren. I do recall the chairman speaking to discussions with the minister's office, and of course the deputy minister sits on the board. At my first Toronto meeting he was sitting next to me, as I recall.

**Mr Laughren:** The reason I ask the question is because in the last paragraph on the first page of Mr Sterling's letter, "As you can appreciate, the government expects all options will be thoroughly evaluated and assessed by the board before decisions on a full recovery strategy are taken. We also anticipate that any future supply alternatives will be consistent with competitive prices and be financially sustainable on an open market."

It seems to me, and obviously I'm not a member of the board, when I read that he's really asking you to go slow and to think about the decisions you're about to make because of the significance of them, not just to Hydro but to the province and, quite frankly, to the government. That's why I thought it was important to know whether or not this letter was tabled or discussed at that board meeting.

**Mr Bullock:** I don't recall the letter itself. I certainly recall discussions around options. I think if you look at the minutes of the meeting you'll see reference to myself raising questions about options. I feel the decision we made that day, I would suggest to you, is consistent with this paragraph.

**Mr Kerr:** I don't recall actually seeing the letter myself either, but I also remember the discussion around the issue of options and needing to know some more before we were getting full-fledged into the recovery plan.

**Mr Laughren:** We talk about options here, and perhaps I'm not being clear enough, because there is a sense by some of us that the only option — it may end up being the right one, the nuclear recovery option, but that that really was the only one. There were different variations of that nuclear recovery option, but basically there was only a nuclear recovery option put before the board, as I understand it. I think that's what Mr Sterling was concerned about.

**Mr Bullock:** If you're suggesting, "Did the board that morning consider the discontinuance of the nuclear operations in the province and look for an alternative power source?" no, we did not do that.

With respect to the problem before us, which was the unacceptable performance of the nuclear facilities, there were several options considered. There were five or six of them: the status quo, which as I said was obviously unacceptable in my eyes, from Dr Andognini's report; and continuing to operate all the facilities and try and correct the problems. That's something Hydro had been trying to do unsuccessfully for several years. I think it led you to the possibility that if you were to pursue that course for another year or two, that you could simply move closer to the edge of an unacceptable situation than you are today. So the ability to, if you like, take and correct the problems within two thirds of the facilities and provide power from alternative sources, I felt, was the most flexible plan and did provide the most options going forward.

As my colleague here said a moment ago, no one on that morning in my view was saying to Dr Andognini and his team: "Approved. We'll see you here in 2001." What we were saying was that it seems to be the most flexible plan and the proper plan to pursue, and that there's a myriad of options that will come before this board in the months and years ahead as we go through this. As I said earlier, to be able to look at what progress was being made a year or so down the road, when some of the tough financial decisions and alternatives with respect to Pickering A and Bruce A need to be made, I felt provided us with the most flexibility as an organization, as a board.

1420

**Mrs Johns:** Good afternoon, gentlemen. I just have some questions about the same issues that Mr Laughren raised. We had Mr Franklin in this morning talking to us about the plan and he suggested that he believed the plan has introduced both the IIPA report plus the recovery strategy, and I think he used the words "interim strategy." Did you feel that this proposal you were being subjected to on August 12 or 13 was a decision you were making for the future, or did either of you ask for further information or any of that kind of —

**Mr Kerr:** I kind of thought that what we had received was a very flexible set of options, and the plan that was being proposed was the most flexible of the plans. It wasn't interim in the sense, I think, that you're describing it to me. It was a plan, though, that could be changed as you went forward. There wasn't a single, one-time, all-encompassing commitment to this plan. It had a lot of flexibility in how you would change going forward. That was how I viewed it, anyway.

**Mr Bullock:** My views would be consistent with that. By way of example, I think the plan permits the board and the management of Hydro to assess its progress in getting to a more acceptable level of operation of these facilities as we go along.

I think our assessment of that progress would govern the expenditures in the continuation of the plan. It's not simply: Make a decision today and you're finished tomorrow morning. This is a three-year recovery plan. Against the options that we could foresee at the time and discussed with the experts, this seemed to be the most prudent course.



**Mrs Johns:** It's my understanding, and I'm not sure it's valid, Mr Bullock, that you had some concerns and wanted to see further documentation after that day. Is that true, and can you tell me what it was you were looking to see?

**Mr Bullock:** I think that I spoke, and it's reflected in the minutes of the meeting, saying that I wanted to see further financial modelling of the various steps within the plan. This isn't a simple, "Do ABC and you're done." There's a myriad of steps along the way where you can reach a crossroads and go A or B. While the plan does provide the flexibility to restart both the A facilities at Pickering and the A at Bruce, you may well reach a decision from market conditions or costs or other reasons at the time, lack of progress in getting the existing 12 properly operating, "Do not restart the A."

I wanted to understand the financial modelling over the full three years of the plan in better detail. Also I asked, as did other members of the board, that the various options we were considering and discussing be more formally documented, and they were, the six options.

**Mrs Johns:** And is this the document? Have you received this document now?

**Mr Bullock:** Yes, I have.

**Mrs Johns:** When did you get this document, which I believe is the six options?

**Mr Bullock:** Yes, I would have seen that in late August or early September. It was considered at a September audit committee meeting. It was in September.

**Mrs Johns:** Okay, and Mr Kerr, the same for you?

**Mr Kerr:** That is the case.

**Mrs Johns:** Did you have other documentation that you were looking for after that meeting, Mr Kerr, that you needed to look at also?

**Mr Kerr:** No. I think Mr Bullock had done a good job of summarizing the kind of information we were looking for.

**Mr Bullock:** Can I just interject here? When you ask, is there other documentation we want to see, I think the board — by my answers earlier, we want to see documentation every month on the progress being made and what the expenditures are and what the alternatives are going forward in this recovery plan.

**Mrs Johns:** You also were concerned about financial information. I believe we've heard that Ms Clitheroe was concerned about some financial information and you asked for additional financial information. Have you been given that since the time?

**Mr Bullock:** Again, I think you're looking at the minutes, unless someone else is suggesting something else. The minutes of the August meeting speak to the need to understand the financial costs associated with the various steps and alternatives in the plan. We've been seeing those and will continue to see them. I think that's what the reference in those minutes is about.

**Mrs Johns:** We've had a great deal of consternation about Ernst and Young doing the audit of the options. Are you two satisfied that Ernst and Young has done a fair and

equitable job, and have you seen the results of their audits?

**Mr Kerr:** They made a presentation to us at the audit finance committee of their conclusions from their review of the optimization plan. From the kind of comments they made, I think it added to our level of confidence that the optimization plan was probably the best route to be following at that point in time.

**Mrs Johns:** Mr Bullock, were you involved in that?

**Mr Bullock:** Yes. I would say generally that's the case. If you look at what's taken place here, the first opinion was the existing management of Hydro, the second opinion was Dr Andognini and the third opinion was Ernst and Young. The latter two seemed to be pretty consistent with the board assessment of this situation. It's not a happy set of circumstances, but it's a course of action that I believe is the right one at this stage for Ontario Hydro.

**Mrs Johns:** I guess my concern is that I have young children and I represent a lot of young people in the province of Ontario. Do you feel comfortable that the board has made the right decision not only for today, but for the future of our kids and their ability to have energy and electricity in the province of Ontario tomorrow?

**Mr Bullock:** After you, David.

**Mr Kerr:** Within the constraints of our abilities to do it, yes.

**Mr Bullock:** I think the plan that's been adopted here provides the province with the most options going forward that are available, that I can see, in that you could foresee a set of circumstances down the road where the province becomes less reliant on nuclear; ie, that the existing facilities that are going to continue to operate be the nuclear assets for the province. You could foresee a plan where the A and B Bruce facilities are the most economical at the point in time you have to reinvest in those and restart them. And you will see develop over the intervening period here alternative generating capacity to fulfil the needs of the province. You're asking me, do I think this is a good course of action for the future of the province? Yes, I do.

**Mrs Johns:** We've agonized over the public versus private sector over these last three or four weeks. You both run and operate major successful businesses. I suspect that you're probably some of the Who's Who of Ontario.

**Mr Bullock:** David is. I'm just from Burlington.

**Mrs Johns:** Well, Laidlaw is definitely up and coming. Tell me, were the decisions made by the board substantially different or was the process different than would have been made at either of your organizations? Do you feel the information you received was different or that somehow the board is not running effectively? Can you comment on that?

**Mr Kerr:** The answer is, no, I don't think it is terribly different than would have happened in our company. I can't parallel it exactly because the circumstances are a bit different, but in terms of my expectations of management, their reliance on third parties, outside parties, to

give them guidance and expert advice and the board's role in being a supervisor of management rather than being the management itself, I'd say followed the private sector parallel quite well.

**Mrs Johns:** Mr Bullock?

**Mr Bullock:** Yes, I've had less experience with this board than Mr Kerr has, but in terms of this particular decision, I think the documentation was pretty fulsome. The presentation by Dr Andognini and his team was reasonably thorough. The board was given an opportunity to challenge many of his statements and to ask for further information, and that's been provided, so I would say this is consistent with the board and that the challenge for the board now going forward will be to monitor and satisfy itself that the plan that's being implemented is carried out as is being recommended.

**Mr Kwinter:** Mr Bullock, you've already heard about the letter that the minister, Mr Sterling, wrote to Mr Farlinger. I think one of the problems we have is a matter of interpretation. I'd like you to just give me your idea of what the interpretation is.

It says: "You can appreciate that the government expects all options will be thoroughly evaluated." Do you read that as all nuclear options will be thoroughly evaluated, or all options period, of any kind, dealing with the generation of electricity?

**Mr Bullock:** I would read the minister's letter, having seen it here before me, in that it references at its start the nuclear performance advisory committee and the IIPA documentation which he had just received and was commenting on, that the options being referred to here would be the options with respect to the nuclear facilities of Ontario Hydro, all options to the restoration of those facilities to the kind of standards we should demand in the province.

**Mr Kwinter:** So your interpretation is that the only option, the grand option, is that we've got nuclear, we've got to stay with it, but now we have this recovery plan and there are all sorts of options within that recovery plan, and as a matter of fact, Mr Andognini suggested option 5, maybe 6, and eliminating —

**Mr Bullock:** There are six options, yes.

**Mr Kwinter:** Yes, but as I say, his recommendation —

**Mr Bullock:** Do nothing, try to continue to do what you're doing, or four others is the way I would describe it.

**Mr Kwinter:** So these are the options that we're talking about, that the board had to deal with.

**Mr Bullock:** With respect to the nuclear facilities of Hydro, yes.

**Mr Kerr:** We did ask the question, were there options other than running with nuclear, and that was buying power or generating power somewhere else, but that did not turn out to be a satisfactory alternative.

1430

**Mr Kwinter:** At that same meeting at which this decision was taken, Ms Clitheroe, who was the chief financial officer of Ontario Hydro, noted that a key element missing from the overview is an economic analysis on the revitali-

zation of Bruce-Pickering versus other generating options. She further explained that, "Although the nuclear option will most often be presented as the preferred alternative because of the associated sum costs, other means of judgement will have to be applied before any decision is made with respect to bringing back the A units."

My interpretation is that she was raising concerns that all of these decisions were being made within the context of the nuclear solution. I'm not saying it's not the right solution. I'm just saying, was anything done concerning her concerns that other forms of generation weren't being considered when this decision was taken?

**Mr Bullock:** Option 5, as you refer to it, which is Dr Andognini's recommendation, deals directly with that issue in my view.

When you start with a generating capacity in the province where about two thirds of it is nuclear today, to say, "Did you consider an option that said, 'Let's just discard that completely and go to zero nuclear'?" that was not discussed. But with respect to the viability of restarting Pickering A or Bruce A, the two thirds that's going to be shut down while you get to the performance standards you should expect on the remainder and the financial alternatives to that could be looked at as part of option 5 here. That's why I think it is the most flexible plan that permits that.

**Mr Conway:** I would like to pick up, gentlemen, with a variety of questions. One of the obvious to me is that you meet on the 12th, having had two or three days to assess a pile of information and recommendations that commit the utility to billions of dollars worth of expenditure, most of which are going to, like most things at Hydro, bear the lovable guarantee of Her Majesty's provincial government. I'm not surprised that we've got the minister writing a letter, because what makes Hydro different than Laidlaw and Noranda is this lovable thing that the Globe and Mail likes to editorialize about so much, the provincial guarantee.

You've got the guarantor writing this letter on the 11th saying, "We hope, before final decisions are made, you look at the waterfront and we look at all of the options." We get decisions made on the 12th which, as Mr Laughren and Mr Kwinter and others here have said, may very well be the best decisions. I don't know. I don't know how I could know, though, on the basis of 72 hours worth of analysis, and quite frankly a lot of it coming from people, I say to you, Mr Bullock, who were there for the genesis of a lot of this problem.

Having said all of that, one of the questions that strikes me is, I'm a board member and I'm going to buy this plan. One of the things that somebody must have said to me is that this replacement energy — because I'm going to lay up, perhaps permanently, a third of the nuclear capacity of this utility. In the short and intermediate term, I'm going to replace that lost power with some very controversial US electricity that's going to bring a bagful of environmental controversy. Did anybody spend any time at the board that day talking about that issue?



We had the Ontario Clean Air Alliance in here last night and they were pretty impressive. They were saying a lot of the things that I expect Ontario is going to hear a lot about over the next three to five years.

**Mr Bullock:** Mr Conway, we started from the premise that the report that was before us readily identified — not by the people, as you described, who created the problem, but by Dr Andognini and his team — that the operational problems that were there needed to be addressed. I don't think anybody's challenging that you can't continue to operate at unacceptable or minimally acceptable standards for any period of time.

I can't let your comment about the financial guarantee of the province pass as being different from how I operate my company. As a director of Ontario Hydro, I take my fiscal responsibility seriously, and that provincial guarantee represents me as a taxpayer in this province both individually and corporately. I understand the seriousness of the financial decision we were making here, and I wouldn't want to let that pass any other way.

With respect to the decision we made that day, we made a decision to set ourselves upon a course of recovery for the nuclear facilities because continuing to operate them as is was unacceptable.

**Mr Conway:** Let me just come back, though, and I direct this point to Mr Kerr. The committee has got all kinds of paper now, some really interesting paper. We've got paper from the federal regulator. We've got all kinds of Hydro minutes that tell us that something called the board's nuclear review committee was up to some very interesting activity in the early to mid-1990s. Quite frankly, the board's nuclear review committee was apparently receiving data much like Andognini presented to the board in 1997. In fact, you could argue on the basis of the data we now have that in a qualitative sense Andognini did not tell the board anything that the federal regulator had not been saying for several years and, quite frankly, that the board's own nuclear review committee was highlighting.

My question is, first of all, what was the board doing when that nuclear review committee was apparently beaver- ing away with all of this stuff that basically Andognini came to confirm in the summer of 1997?

**Mr Kerr:** I'm not sure my memory goes back as far as you'd like it to in this respect.

**Mr Conway:** I'm looking at data from 1994, 1995, 1996. You were a board member —

**Mr Kerr:** With due respect, I haven't read it since probably the meeting following those meetings, which might have been a month after those meetings. That would be the most recent exposure I've had to that information. So I find it difficult to respond to what you're saying.

**Mr Conway:** The committee is having a problem and I am having a problem because if Andognini came as a bolt out of the blue, then I would say, all right, some of what you said is obviously credible, but it didn't come out of the blue. The federal regulator and the board's own nuclear review committee, for months and years prior to the

summer of 1997, were highlighting a number of these basic points, and nothing was happening.

In fact, Mr Kerr, there is some very clear evidence that the action plan that the board took in 1993 to shed thousands of people exacerbated the problem in a very real way. You were a board member for four years. I'm trying to get my mind around what the board was doing in 1994, 1995 and 1996, before Andognini arrived, a board that was clearly, according to these documents, being told by the federal regulator and its own nuclear review committee that there was trouble and things were getting worse, not better, pre-Andognini.

**Mr Kerr:** Without having read the documents, and I can't remember reading them at this point in time, although I undoubtedly did since we approved minutes, I'll go back with my memory as best I can to probably mid-1996, when there was a shutdown of the Pickering plants and the issue of the reliability of the nuclear facilities really became a front-and-centre attention issue at the board. It may have been before that; I just can't recall.

In any event, I think that's what triggered the idea of a nuclear recovery plan. I remember the president, Al Kupcis, at that time hiring some people to help with the development of a recovery plan. I think by the end of the year he had decided that he would get what turned out to be Carl Andognini for Hydro. But beyond that mid-1996 period, I'd have to go back and look at the documents to be able to help you.

**Mr Conway:** I appreciate that. The problem I'm having is that many of these documents make the point that there was a management problem, a culture problem, and a big part of that — Bob Franklin was in here talking about it this morning, and others have spoken to it as well — was that too many of the central players at the operational level were leaving. There was no replacement. There was no replacement strategy.

It's as though you're running the Blue Jays and you're being told by every scouting report that you've got a problem in centre field, your bullpen is a mess and first base is about to develop into difficulty, and the response is, "I think we need to hire a new consultant because I think the marketing people in head office need some help." Well, the problem was at first base and at centre field. That's where the operational difficulty was.

I'm trying to think, where was the board? Where was this nuclear review committee? Where was the board through 1994, 1995, 1996? The evidence getting up to the board, according to these documents, is clear, and the board didn't act.

**The Chair:** Question, please.

**Mr Conway:** All of a sudden we have this dramatic development in August 1997. When Andognini confirms a lot of what's been said, all of a sudden there's this cataclysmic response, bang: "We've got to really do things."

**Mr Kerr:** I didn't hear a question, did you?

1440

**Mr Bullock:** Maybe I can comment. That the problems existed before Carl Andognini arrived on the scene in January I think is quite evident even to someone who just

joined the board in July. That the board had been receiving information that there were problems and trying to deal with those and challenging management to deal with those things — after all, the board does not manage the company; the management does — and that the management had been unsuccessful in dealing with those problems I think is also evident. That led to the ultimate decision to bring in Carl Andognini and get a third-party appraisal because the in-house activity wasn't solving the problem.

That's how I view the situation. Carl Andognini brought forward a report that in its breadth and depth was frankly startling to me as a new board member, and I think probably startling to the other board members, as to the urgency and depth of the problem, not that there were problems. That was what we were confronted with in August and that's what we acted upon, and I think the course of action we've taken is the right one.

**The Chair:** We'll do another round again with the caucuses, about five minutes for each caucus. Just before we start that up, Mr Bullock, we were talking last evening in evidence before this committee about the 1989 memorandum of understanding that exists between the Minister of Energy and the board of directors of Ontario Hydro.

I'm reminded of article 20.1, which reads in part, "To reach concurrence on all matters involving Ontario Hydro's financial arrangements which could increase the province of Ontario's direct, indirect or contingent liabilities or could otherwise have an effect on the finance and debt management policies of the province of Ontario." Article 20.3 reads, "Ontario Hydro shall keep the treasurer informed in a timely way of its activities and proposed decisions which could affect the financial, economic and fiscal responsibilities of the treasurer."

In your opinion, was the action of the board on August 12 within the spirit and the letter of that agreement?

**Mr Bullock:** In my opinion, yes, sir.

**The Chair:** You indicated to this committee you did not see physically the letter by Minister Sterling on August 12.

**Mr Bullock:** I'm saying I don't recall seeing it. The contents of this letter were certainly discussed. There is nothing in this letter today that comes as, "Oh, my goodness, that's a surprise from the meeting," as I said. The issue of the options and so forth was certainly discussed at great length at the meeting.

**The Chair:** It would be helpful for me just for a moment to understand how in your mind the recovery plan was formulated that was presented to you on August 12. How long had that been forming? Who had been the constituents who assembled that plan? We heard evidence just before you assumed the witness stand that it seems as though it was a plan that was developed by smorgasbord; it was a little bit taken from here and a little bit taken from there and a little bit from here, and it came somewhat from the expert group and perhaps some did not come from the expert group — resident, that is. Can you perhaps cast a little bit of light on how that plan was formulated?

**Mr Bullock:** It was a broad analysis undertaken within the nuclear facilities under the direction of Dr Andognini. I did not hear the testimony before me here today, Mr Chair — I just arrived before we started — but in the sense of the responsibility for the report and the contents of the report, it's clear to me it rests with the chief nuclear officer of Ontario Hydro, Dr Andognini. He employed a number of new resources he brought to the organization as well as resources within the organization to prepare and put together his assessment and his recommended courses of action and the alternatives. So I would say Dr Andognini is the leader of that report.

**The Chair:** I see. The final point, back to the memorandum of understanding and the words that read, "To reach concurrence on all matters": Is it your opinion that the Minister of Energy was in concurrence with your decision taken on August 12?

**Mr Bullock:** In the following sense, sir. The deputy minister attended the meeting, sat next to me and participated in the discussions. While we were having the meeting, the minister was on CFRB discussing the contents of the report while we were considering it, I recall. So it would be hard for me to accept that the minister was unaware of the report.

I think what we made was a decision to set forth on a course of action. As to reaching concurrence on the costs associated with that action, I think that's a process that's before us rather than behind us.

**The Chair:** So in your mind, concurrence is awareness.

**Mr Bullock:** We've set forth a course of action for the board. Ultimately, the minister can challenge the board. I presume part of this process here is challenging the validity of our decisions.

**The Chair:** Let's start the round again, please. Mr Laughren, five minutes.

**Mr Laughren:** When you talked about the minister being on CFRB discussing the report —

**Mr Bullock:** I may have the wrong radio station.

**Mr Laughren:** I'm sure it was the right radio station. It was the IIPA report you're talking about?

**Mr Bullock:** Yes, sir.

**Mr Laughren:** In his letter to Mr Farlinger on the 11th he says, "This morning I received a preliminary briefing from my staff regarding the results of the IIPA report," so it's clear he had been briefed on that.

You gentlemen are both members of your respective boards, I assume, voting members of your respective boards?

**Mr Bullock:** Yes.

**Mr Laughren:** I'm wondering, just as a matter of interest more than anything else, and I know you're CEOs at your respective boards but not at Hydro: Is there any qualitative difference in the way in which the board meetings are handled at your respective companies and at Ontario Hydro?

**Mr Kerr:** I don't believe there is. I think the board emphasizes hearing from the individual members of the management team with respect to the subjects that are



being brought to the board so we can hear from the horse's mouth, so to speak. We do take time at the board meetings to exclude management so the directors have a chance to discuss issues they might not like to bring up with management present. We certainly have far more board meetings than we would have in our own company, so we get to know each other perhaps better than our own directors get to know each other. But on the whole I'd say that qualitatively, yes, it's good practice.

**Mr Laughren:** The reason I asked the question is that I've often wondered how, as outside directors on Hydro — there's a difference between doing that, I would think, being an outside director, and your respective roles in your companies.

**Mr Bullock:** Giving advice and getting it are the two roles: giving advice and getting it.

**Mr Laughren:** Yes, that's right. It seems to me that it must be extremely difficult as an outside director — and believe me, I don't feel sorry for the Ontario Hydro board of directors; that's not where I'm coming from. But it must be very difficult coming to that position and, given the complexity of Ontario Hydro and in particular its nuclear division, how you know you're getting all the information, given the history at Ontario Hydro and in particular its nuclear division.

At the board meetings, did you always feel you had all the expertise you needed to make important decisions?

**Mr Bullock:** I have a much shorter tenure with this board.

**Mr Laughren:** Yes, I appreciate that.

**Mr Bullock:** I think on the specific issue here, could I be 1,000% satisfied that I've had all the information, no, I can't. But did Dr Andognini and his team stand up to the rigours of the examination of the board? Yes, they did. Did the report itself seem to be fairly comprehensive? Yes, it did. In the end, a board, whether it be at Ontario Hydro or Laidlaw or Noranda, ultimately applies its judgement and its business experience, if you like, to the decision at hand and the recommendations of management and the experts available to it.

**Mr Laughren:** Mr Kerr, you've been on the board for about four years, I believe. You must have been aware of this ongoing problem with the nuclear division, given some of the federal regulator's comments. Did you have a sense of increasing alarm as time went on about whether or not you were getting enough information and getting the accurate information and whether you were capable, quite frankly, as an outside director, of making the right decisions?

**Mr Kerr:** I think the record will show we did have an increasing sense of alarm through a period of time. In terms of my own comfort, I guess I relied on a number of things. One was simply the board processes, that is, that we had a nuclear review committee that would be considering these issues in greater detail than the full board as a whole and that the nuclear committee had access to and heard from expert testimony in the areas they were dealing with.

1450

**Mr Laughren:** Is that what they call the oversight committee?

**Mr Kerr:** I just know the name nuclear review committee, which is a committee of the board. I guess it's the same thing, although there may be an oversight committee which is a management committee as well, which is different. I'm thinking of the board committee now.

**Mr Laughren:** Were either of you members of that board committee?

**Mr Kerr:** No, neither of us.

**Mr Laughren:** Thank you.

**Mr O'Toole:** Just following up a little bit, Mr Kwinter and Mr Laughren both asked about board performance. I know it's kind of conjecture in your case, Mr Bullock; You've just been there a few months, I gather, on the Hydro board.

**Mr Bullock:** Yes.

**Mr O'Toole:** We have also heard from previous CEOs who have characterized the organization as somewhat suspect. We have heard from board members and executives, Ms Clitheroe and Mr Fox. We have heard from the society and we have heard from the Power Workers. I'm just asking a question from the board perspective, the broader view, if you will. In your view, is the organization well managed from a human resource management perspective? I question the gold-plated buyouts and the now shortage of personnel. The \$32-billion debt: Is it well managed financially? Is it well managed technically, since we have heard that since 1985 it has been nothing but recovery plan after recovery plan that never worked? I put to you, following up on their questions on the board, how are we doing? We learn from history. Would you buy stocks in this company? Laidlaw does fairly well in the marketplace.

**Mr Bullock:** We have had our challenges in the past as well.

**Mr O'Toole:** Of course.

**Mr Bullock:** I think your question is a very serious one and I take it as such. That there are HR challenges within the organization that have been there for some time I think is self-apparent. Can they be addressed? I hope and believe they can.

You asked a question about the management of the debt structure of Ontario Hydro. In terms of the technical management of that and financial record-keeping and so forth, I think it's quite adequate.

On the recovery plans you talk about within nuclear, you are quite right, they have been around in one form or another for a number of years. I have not been, but from what I have read of them within the material I have seen, the problems have become increasingly serious in the period, so the recovery plans — they may have had a different name — didn't accomplish the goals.

Frankly, one of the questions I asked in August of Dr Andognini was, "Based on the track record, how confident can I be of your plan?"

**Mr O'Toole:** That's a very good question, which leads me to pursue one of those four sort of management func-

tions: human resources, finance, kind of admin and technology. I wonder about the decision to recruit an American, Mr Andognini, and his plethora of experts, pretty well all American from what I'm gathering.

Is this not an admission by the organization that there was indeed a cultural problem, that they had to get some kind of neutral nuclear expert to say, "Yes, you're right in your suspicions here, Mr Farlinger," or whoever drew on — I think Mr Kupcis was the person responsible for saying, "Look, give me some clean-hand expert to come in here and look at the peer reviews, look at the AECB reports" — he looked at every report the board has seen apparently — "and tell me what I already should know if I was really paying attention."

I'm not blaming you, you weren't there long enough, but do you understand what I mean? Is that not an admission that the organization internally was incapable of turnaround management?

**Mr Kerr:** I would comment that, yes, it must have been in part, because the order wasn't to go out and find a Canadian who can do this; the order was to go out and get the best person possible for the job.

**Mr O'Toole:** Which is appropriate, I agree. I'm going to draw a little bit different circle here. This one is looking at A Framework for Competition, the Macdonald report. I was interested in the coincidence, if you will, of the Macdonald report — my riding has two nuclear plants, and as Mrs Johns said, we represent the interests of our broader constituency, and there is a lot of concern for both the jobs and the safety. They were very satisfied when it was admitted in the Macdonald report that privatizing the nuclear was not one of the options.

I put this to you: If we're going to privatize the nuclear, here enters my almost conspiracy theory mind, saying, "Okay, we've got this plan now that's going to bring everything up to snuff in both fossil and nuclear in the recovery plan." That's what this is. "You take down the coal, you bring them up to scratch and they're great assets. We spend all the taxpayers' money bringing all this stuff up to gold scratch. Then we bring in the white paper which says, 'By the way, let's look at this whole framework for competition.'" You look at the experience in Britain, selling undervalued assets. Is this just my devious imagination or is there some other piece to this very expensive puzzle?

**Mr Bullock:** I can comment, and then I guess Mr Kerr can provide his views. I don't frankly understand the link you're trying to make here. The safe operation of the nuclear facilities in the province is the goal of everyone, whether they are privately or publicly owned. When you sell something, if you sell it — this is a personal point of view; it's not Hydro or the board — I remain to be convinced of selling anything at this stage but maybe I can be convinced. That's something that's before us if it comes forward in the form you are suggesting. To me it's no different than I can sell you a seven-year-old bus badly in need of repair and get one price, and I can sell you one that's restored, and I can sell you a new one at a different price. A nuclear facility that is shut down and not operat-

ing isn't worth a lot either, whether it's private or public. I don't understand the —

**Mr O'Toole:** I'm only saying that perhaps your assets are better sold in the private market, and most experiences are they are sold under value. That's the British experience. We have been told that a couple of times. Just one more thing —

**Mr Kerr:** I just might add that the board doesn't spend time thinking about that.

**Mr O'Toole:** No, I would hope they would have a little longer view than just the immediate decision.

**Mr Bullock:** As someone who has bought assets from the public before, I can tell you —

**Mr O'Toole:** We're looking at a deregulated marketplace and competition. That's clearly on the table.

**Mr Kerr:** As far as our responsibilities at Hydro are concerned, that isn't on the table.

**Mr O'Toole:** You're not looking at the opportunity for privatization?

**Mr Bullock:** We're going to react to the government policy.

**Mr Kwinter:** I'm not directing this specifically at any one of you but anyone who wants can respond to it. One of the concerns I have is that there is a problem at Ontario nuclear that everybody knows about. It has gone on for years and years. We had Mr Franklin in here today saying he was very disturbed that during his tenure from 1986 to 1991 the licence was reduced from two years to one year, which set off red lights. It was obviously a problem. Subsequent to that, in 1996, the licence at Pickering was reduced to six months, eventually up to nine months. If you take a look at the AECB reports over those years, they were highly critical of the operation of this facility.

My concern is that we get Mr Kupcis in. He gets a handle on what is happening. He knows there is a problem, admits that everybody knows there is a problem, but he wants to quantify what that problem is, and that is why he engages Andognini to come in and tell them what the scope of this problem is, not to say, "Give us a clean bill of health." He knows there is a problem. They get this report. On April 10 or 11 they get an interim report to say, "Here are the problems," and then finally on August 12, the final report is tabled.

As members of the board: One of the concerns I have is here is a man who has gone out, has decided he has to know the scope and the size of the problem, brings in a report and then resigns. What was the urgency of this whole scenario? There wasn't anything really new in the report other than the size of it, the scope of it. Everybody who had an interest in Ontario nuclear knew these problems were there. Suddenly the report is tabled. The board, under normal circumstances, would have received it and then they would have had to come forward with this recovery plan. I admit there's a huge potential liability in doing it, but that could have been done in an orderly way. But suddenly the report is received, the recovery plan is accepted and the CEO resigns which immediately escalates the whole issue, and we now have a select committee looking into it.



## 1500

Why was there this urgency? Why did he resign as opposed to saying: "I'm the guy who has finally come to grips with this thing. Let's see if we can see this thing through"? Why did the board not say: "We're not going to accept your resignation. This is what is going on. You've brought this thing to this point. Let's see if we can now move forward."

**Mr Bullock:** Perhaps I can try and answer that, Mr Kwinter. I'm not sure my answer will be very satisfactory to you, but I'll try. As I view it, the role of a CEO is not to simply identify problems, particularly if the problems are partially of his creation. You have in Dr Kupcis I think a highly principled individual who, when he saw the report and recognized the depth of the problem, tendered his resignation. For you to suggest the board should have rejected the resignation and said, "Carry on," I don't think is a very practical solution.

The board felt at the time, having read the report and having seen the recommendations, that it was time for fresh leadership at Ontario Hydro. Dr Kupcis chose to resign. If he hadn't done that, I guess the question for the board to ask would have been whether the board felt he was the individual to lead the recovery, because it is the CEO's role to lead the recovery in an organization like this. That's a question we weren't confronted with because of his resignation.

As to the speed with which we made the decision, I don't think I can add anything new to what I've already said today. We received the material, we set the organization on a course of action towards recovery that will take place over two or three years, and there are going to be a lot of decisions that will be weighed going forward as we reach points of options as we go along this recovery route. This is the most flexible recovery plan available, I believe.

**Mr Conway:** I'd like to come back to you, Mr Kerr. I am deeply troubled by the last round. I'm going to set aside for the moment the latest recovery plan. I want to go back to 1993, because unlike some members here, I was here in 1992-93 and I remember the sounding of trumpets: "Big, bad Maurice has ridden into Hydro and he's going to fix the bloody problem. He's got a solution." And apparently the board approved it.

A big part of it was shedding 10,000 people. All kinds of evidence now suggests there was a very real concern, getting worse as days went on, Mr Kerr, that the wrong people were leaving. It wasn't unusual. Corporations everywhere were downsizing. There was beginning to be some feeling and some evidence that, just maybe, not all the right people were leaving.

I'm back to 1993, 1994, 1995. The board, Mr Kerr, of which you're a member, is there superintending this recovery plan, Mr Strong's recovery plan, which is exacerbating the very problem you're trying to fix in the big part of your business — nuclear. What was the board doing, Mr Kerr? How much did the board know? You were there for those four years.

If I'm trying to make an assessment about the implementation of the next recovery plan, I think it's only fair to

look back at the success or lack of it of the last recovery plan. What we now know is that the last recovery plan appeared to have made the situation worse. You scowl, Mr Bullock, but I'm going to tell you that the chairman of the federal regulation was in here saying that they got this close in December 1996 to closing Pickering down.

**Mr Bullock:** I'm not challenging that one.

**Mr Conway:** So my question to you, Mr Kerr, is, where was the board in this period, 1994, 1995, 1996, as the problems were developing, being reported through the nuclear review committee? What did the board know and what, to the best of your knowledge as a board member through that four-year period, did you and your colleagues on the board do to address the problem?

**Mr Kerr:** You're stretching my memory but I'll do my best. I think when the people-cutting went on under the chairmanship of Maurice Strong, it was generally believed that was necessary because there were too many employees at Hydro and it needed to be reduced. Then they obviously ran into the very practical problem we've run into in our own company, and that is, when you cut people, where do you start? Generally what you have to do is make some sort of early retirement package available to people generally. As soon as you do that, you're unable to choose the people you want to keep and the people you wish to depart. They are on their own. They make their own choices under the programs for retirement that are available. As a result, you lose good people when you don't want to.

**The Chair:** Thank you. Let me give you another minute or two.

**Mr Conway:** No, I'll come back.

**The Chair:** We've only got about another hour. I don't want to cut you off when you're in good flight, but I have to be fair to the other members.

**Mr Conway:** These are board members, and I'm telling you, they're impressive people with impressive credentials.

**The Chair:** I am not prepared to discount the importance of that either, so let's get around it. We'll discipline ourselves very promptly.

**Mr Laughren:** I feel guilty. I'm interested in knowing the kind of information that would percolate up, if that's not a contradiction, the kind of information that would come up to the board. I'll give you a very specific example. Mr Kerr would be a better one to respond, I suppose, because of the date. This is August 11, 1995, two years ago. It's a letter from the AECB to Mr Charlebois, the director of the Pickering nuclear division, Ontario Hydro, and it says:

"There has been recently a significant number of serious events at both Pickering...A and B leading us to question Ontario Hydro Nuclear's effectiveness in maintaining a satisfactory level of safety. For example, we have observed that station management staff have not been demonstrating by their example appropriate consideration to safety, we have confirmed that less experienced workers who have thrived in the present environment do not possess or understand the fundamental principles of safety which were instilled in Ontario Hydro workers of the past

and we have found evidence that other corporate priorities are overriding safety."

The letter goes on, if you want more, but that's fine. Would that kind of letter, which I think is a serious letter from the federal regulator, be brought to the attention of the board or would that be swallowed by the structure between the head of the Pickering nuclear division and the board? Would it be swallowed up in there somewhere?

**Mr Kerr:** I would hope that kind of letter, while maybe not appearing specifically as a letter in the hands of the directors, would be reported at least to the nuclear review committee.

**Mr Laughren:** But it doesn't ring a bell in your mind?

**Mr Kerr:** Not specifically, no.

**Mr Laughren:** This was a year before the federal regulator is saying they came within an eyelash of shutting down Pickering A, yet this is saying the problems are there in Pickering A and B. I'm wondering, as a board, when you see something like this, when something like this is brought to your attention, does it give you pause for thought? How much else do you not know as a member of the board?

**Mr Bullock:** Perhaps I could comment there. The report of Dr Andognini I think fully acknowledges that the reporting structure on this kind of thing is inadequate and has been inadequate within Hydro, and that needs to be addressed as part of the re-engineering of the management process of this company.

On something of that significance, and you were asking a while ago about comparing this board with other boards, it would be unusual for a letter like that to go to all board members of the board of another company, but would the CEO report that as a significant event and challenge to the board? I would think it would be a normal course thing for the CEO to do. Whether it occurred in this instance I just don't know, but I think Dr Andognini has pointed out that some of the occurrence reporting within Hydro needs to be changed.

1510

**Mr Laughren:** But wouldn't you feel blindsided in your private life with Laidlaw, or with Noranda, if something like this happened? Wouldn't you have somebody walking the plank or at least having to answer for that if you didn't know about it?

**Mr Bullock:** When responding to Mr Kwinter earlier, I suggested that I took a different view of the responsibility of the CEO in this matter. It's with that in mind that I would have similar views to yours in this matter.

**Mr Laughren:** Thank you.

**Mrs Fisher:** Good afternoon. Welcome to this hearing process.

**Mr Bullock:** Thank you.

**Mrs Fisher:** I guess the common understanding is that the Andognini report was needed and in essence technically has been accepted as — I haven't heard anybody yet challenge the technical findings of it. However, there continues to be this issue with regard to the human resource side of it. Most of the findings within all of the 16 or 17 volumes of the IIPA report relate to the human

resource side of it, whether it be training, safety application, available numbers of qualified staff. I'm coming at this from an approach I've been trying over the past whatever time. I don't really want to spend a lot of time finding blame. I don't think that's going to help Ontario at all. I'm very much interested in going forward on this. So my questions are going to be directed in that way.

The Andognini report came to the board and we can be critical of the amount of time it didn't have for full evaluation. In reading the board minutes I guess that was reflected by the chief financial officer of the corporation, Ms Clitheroe. When she was here I tried to get into a pattern but it's very difficult with time restrictions as well — I'm not looking at you because of that; I understand how the fairness happens.

With regard to the financing of the recovery, her comments from the August 12 board meeting reflect that the key element missing was the overview of the economic analysis on the revitalization of Bruce and Pickering versus other generating options.

Then this paragraph concludes by saying, "The board discussed the sensitivities surrounding taking the units out of service, and it was noted a large percentage of the cost is required replacement energy cost." I'd like to focus on that for a second. Either fortunately or unfortunately, I am the representative for Bruce, so we all understand what that means in terms of impact. But I look at it more globally than that. I've been involved with Ontario Hydro for 27 years now and a lot of my community volunteer work was contributed towards making sure that whole program continued to be one not only in my community but for Ontario. I want to start with that.

I tend to get criticized, within the room even, on my objectivity with regard to Bruce, but I have to focus on it because obviously it is the one that is most seriously impacted immediately. I would share my same concern for the future of Pickering A, although they say right now it looks like it should come up on a first priority basis, and further to that to Darlington because of changes that are common with Bruce and Darlington that you don't find necessarily with Pickering.

Having set that stage, what I can't get through my head is this: I absolutely share Ms Clitheroe's concerns, and as a senior vice-president of a corporation responsible for public dollars I can't understand why — it sounds like criticism and I have to say it — she wouldn't have been stronger, more influential in not letting the decision happen that day.

I'm a layperson on the outside but I happen to do a lot of homework, and the thing that's bothering me is this. If I know that the replacement costs for energy will run anywhere from \$2.5 billion to \$2.7 billion and I know — for example, let's take the Bruce site to start with and we can move over to Pickering in a second, I realize Pickering has a billion dollars invested in the reactor retube, already there, ready to roll. Unit 4 is supposed to come up and be licensed this December if it meets safety requirements.

If we look at the cost effectiveness of the application of this thing, I have to ask you this: Instead of buying re-



placement power and taking away the ability to sell, instead of not investing in what Mr Andognini recognizes is the most important lacking feature within Ontario Hydro right now, and it's not infrastructure, it's staff, qualified staff, and good management decision makers —

**Mr Bullock:** Practices.

**Mrs Fisher:** And decision makers. Practices, I agree. But a practice is only as good as the decision in the end, and none of the decisions lately have been very good. That's not a criticism of the board. The board reacts to what management feeds it. Now, I want you to have me understand — they say there were six options presented. I know for a fact that the community economic impact of the Bruce, for example, was not considered seriously. I think it got a mention. In the past when Ontario Hydro was making significant downgrading decisions in its staffing numbers, it came to the community and said, "What will it do?" and it had a bearing.

Do you not feel Ontario Hydro has some type of social or moral obligation to a community where it knows it is the only major industry in that backyard?

**Mr Bullock:** Let me try and answer that. I think you've raised several very interesting points. You mentioned the fact that there's a significant investment in this program for replacement fuels. It obviously raises the question that if you don't restore the nuclear facilities, that's not a one-time cost, it's a continuing annual cost that multiplies several times going forward. That's an important thing to bear in mind when you look at this plan.

Your comments about the Bruce facilities or the Pickering facilities are quite valid, but Hydro has struggled now for several years to operate these things in an acceptable manner and has come up short. What has been put before us in the form of the Andognini report is a process that should lead, I believe, to the kinds of standards we should have in this province, albeit starting with two thirds of the facilities and then having the ability to add back Pickering A and add back Bruce, or add Bruce, add Pickering. Those decisions are yet to be made based on economics, and yes, I think the impact on the first community is part of that consideration.

**Mrs Fisher:** But it wasn't brought into consideration — the economics of it.

**Mr Bullock:** We did not make the decision to shut Bruce and not re-open it.

**Mrs Fisher:** Well, excuse me. You did make a decision to shut Bruce down at least until 2000. By the way, by the time you come back to rediscovering that you shouldn't have done that, my suggestion might be that you'll have lost all your human resource potential from that community. You will have totally affected, and not only that demolished the rest of the secondary impact side of that community. I don't mean to be rude and I know you're brilliant, but I'm just a little bit bright —

**Mr Bullock:** I'm far from brilliant, believe me.

**Mrs Fisher:** All I have to say is that kind of comment causes me more irritation instead of giving me some kind of comfort level. You got a little bit of comfort level when you said Pickering first or Bruce. I thought, "Oh, a ray of

light, this thing's starting to click somewhere." But what I have to ask is this. I'm going to tell you I applaud Mr Andognini, he's got more guts than anybody else I've seen in Hydro for 27 years and I've been on the outside banging on doors forever. I thought maybe getting here, this might help the situation, can't quite figure out yet if it has or not; we'll see over time. But the bottom line is this. Let's assume his report is right. Let's assume IIPA is right. I asked Mr Farlinger, I asked Mr Kupcis, I asked Mr Andognini, why don't you just admit — I asked Mr Strong, this was the one that got me — you're wrong? You've spent the money on the wrong buyout. Reinvest. Forget your mistake. Admit a mistake. It's done. Bring them back.

He says there aren't available staff. That's not a fact. Now I hear yesterday via a rumour — this morning at one o'clock in the morning I get a call telling me — there's an ad out there. Well, wonderful, a bit late. What consideration was given to numbers and fact-finding? I don't know what the replacement salaries were, but I know that somewhere, somebody said \$5-billion recovery program. I know that the 1,725 that have been announced since were announced a month and a half later. Why wouldn't you know that the day you announced it, if in fact you considered all financial implications?

1520

I know the private sector has made an offer, in a 1996 management study, to refurbish Bruce A with private equity injection, which quite frankly took a little bit of time for the labour force to understand and accept that changed philosophy, but they did. Even Mr Murphy talked about it here this morning. That wasn't part of the options that were considered. How then can you make a decision to close it now, what you've done? Unit 1 got its final announcement last Friday, 2 is out, 3 and 4 are coming back for three months if something isn't done. Are you willing to open the door for reconsideration?

**Mr Kerr:** I don't know that it's necessarily our decision to open the door for reconsideration.

**Mrs Fisher:** You're the board.

**Mr Kerr:** The board — I think the point was made — responds to management's initiatives, and we do.

**Mrs Fisher:** In the end, you're the board. In the end, you decide. What do you mean, you don't know if it's your decision?

**Mr Kerr:** Well, that's what you said. I think earlier you said that we respond to management's initiatives, if I'm not mistaken.

**Mrs Fisher:** And you can deem them correct or incorrect and then you make a decision.

**Mr Bullock:** That's right and I think the best advice we had before us is that the continued operation of Bruce A as is, and Pickering A as is, with the resources available, will ultimately lead to an unacceptable situation, the date of which is hard to predict but it's likely sooner rather than later. That's what I've been operating on. I accept that there's pain for Bruce, and it's great pain. Whatever could be done to mitigate it should be done, but the fact remains you can't run the status quo. They've

continued to deteriorate for the past several years and they're getting dangerously close to an unacceptable level right now.

**Mr Conway:** The interesting thing is that the federal regulator, both in testimony before the committee and in documentary evidence elsewhere, made the point that the situation from their point of view, they thought, was getting somewhat better on the eve of the dramatic announcement by the Hydro board on August 13. Let me come back to another aspect, again particularly —

**Mr Bullock:** I don't think we share that view.

**Mr Conway:** I can only tell you what we were told by Dr Bishop, and supported elsewhere with material. Let's look at the recovery plan, because, boy, you guys were in a big hurry. I understand the status quo is not acceptable, there's trouble looming, trouble that was looming for some time. I am very unpersuaded by what I've heard here this afternoon, particularly from you, Mr Kerr, about the board's oversight and due diligence of the 1993 recovery plan, which was dramatic and significant, but that's for me to be concerned about.

Now we're at another phase, another recovery plan. Let's take a look at that. I'm trying to get my head around the board that day in August 1997. You've got a recovery plan. It's got financial implications that are going to be of interest to a number of people. Obviously the Ministry of Finance will have an interest. To the best of your knowledge, gentlemen, was the board made aware of whether anyone from Mr Eves through to his deputy or any senior person at the Ontario Ministry of Finance — when the board was making its decision, were you aware that anyone at management or at the board level had canvassed Mr Eves or Mr Gourley or other senior people at the Ministry of Finance about the cost implications of this proposed recovery plan that you were about to endorse?

**Mr Kerr:** Not specifically, no.

**Mr Bullock:** Could I comment further on this?

**Mr Conway:** Absolutely.

**Mr Bullock:** I think what we were trying to do in embarking upon this plan, and understanding the costs associated with the cost to Hydro, was satisfy ourselves that Hydro had the ability to finance those costs. I think we are satisfied that is the case.

**Mr Conway:** There are those in the community who will argue that the recovery plan you have in fact endorsed will lead Hydro to showing negative retained earnings in the immediate or intermediate future. Is that your view?

**Mr Bullock:** Absent rate changes and absent financial restructuring, that's correct.

**Mr Conway:** And the government has stated a policy that there is a rate freeze through the end of the decade.

**Mr Kerr:** That's my understanding, but I can't say I've ever seen anything in writing.

**Mr Bullock:** That's my understanding as well.

**Mr Conway:** So there's a real prospect that the recovery plan that you've embarked upon will leave the corporation with negative retained earnings.

Critics will also point out that your recovery plan will put the corporation in a situation where it will not be able

to meet its statutory debt retirement obligations. Was that matter canvassed at the August 12 board meeting?

**Mr Bullock:** Within the current operating environment of Hydro being essentially a monopoly?

**Mr Conway:** All I know is that there's a statutory requirement that sets out conditions about debt retirement. You've approved a recovery plan that some —

**Mr Bullock:** This suspends the debt retirement that we were undertaking prior to that, that's correct.

**Mr Conway:** Did the board have any concern about that?

**Mr Kerr:** We have had concern. In fact, I think we were shown some legal opinions relative to whether or not it was necessary to continue to have a statutory debt retirement provision amount set in the accounts. I cannot recall at the moment just how clear that opinion was. Do you recall?

**Mr Bullock:** The legal opinion the board had received in this area was that if in its wisdom the board felt the negative equity and suspension of the debt recovery program were the best course to pursue, we could proceed to do that. There was no impediment to —

**Mr Conway:** Just so I'm clear, Mr Kerr, the board was given a legal opinion as it considered this recovery plan, which legal opinion suggested that there may be circumstances under which the statutory debt retirement obligations would not apply. Is that what I heard you say?

**Mr Kerr:** No, I think Mr Bullock summarized it correctly. As I said, I wasn't specifically able to recall what the legal opinion said, but my understanding is just what Mr Bullock repeated to you.

**Mr Conway:** You're both business people and you're approving on the quick a new recovery plan with multibillion-dollar obligations. Nobody has apparently checked with the shareholder, to the best of your knowledge. The recovery plan is almost certainly, in the short and intermediate term, going to involve the corporation in the purchasing of or in the production of controversial power. The environmental questions that I mentioned earlier were clearly discussed. Am I right?

**Mr Bullock:** We were satisfied we could operate within the emission standards.

**Mr Conway:** You were satisfied that you would be able to meet the emission standards?

**Mr Bullock:** As they exist today.

**Mr Conway:** As they existed; that's interesting. You're also presuming a recovery plan that has some very interesting implications for stranded debt. You're going to lay up a third of your nuclear capacity and there are those who would have us believe that if you lay those reactors up for any length of time, it may be very difficult and very expensive and perhaps even impossible to bring them back into production. Your recovery plan certainly, at the very least, complicates the stranded debt issue. What was the attitude of the board on that question?

**Mr Bullock:** Perhaps I could try to respond to that. As a relatively new board member, I've had difficulty with the concept of whether it's stranded debt or stranded assets, but be that as it may, it's the left- or right-hand



side of the balance sheet we're talking about here. If Hydro continues to operate in its present legal structure with no competition, I don't believe there is a significant amount of stranded debt. This issue you're raising is an apples-and-oranges argument. It's different from what we're considering here today. The stranded debt issue comes about whether you introduce competition to the marketplace, sir, not whether there's the assets related to the nuclear recovery plan.

**Mr Conway:** There are those who will have observed that over the course of the last three or four years this corporation wrote off \$7 billion worth of assets. I think that may be the number; I may be incorrect.

**Mr Bullock:** But stranded debt, by definition, is an organization's ability to repay.

**Mr Conway:** But you're now going into a recovery plan where you're almost certainly going to be showing negative retained earnings. You're going to be incurring billions of dollars worth of additional liability. You're laying up a third of your nuclear capacity. What kind of signal are you sending to Wall Street and Bay Street? By the way, you may not be able to meet your statutory debt retirement obligations, which I gather weren't considered too onerous to start with.

**Mr Kerr:** I think we crossed the bridge that we weren't going to be able to meet them. But I don't think the debt will be growing. I think the change in introducing the plan has been that instead of being able to reduce debt, as we have been doing, the program will probably result in the debt remaining at about the same level going forward.

1530

**Mr Conway:** So I take it, particularly from what you've just said, Mr Bullock, that you were thinking about this recovery certainly in the context of a new electricity environment — competition and other things?

**Mr Bullock:** I'm sorry, would you repeat that?

**Mr Conway:** I'm trying again to get my head around the context in which the board made this decision. I gathered from something you particularly, Mr Bullock, said a moment ago, that the board was looking at all of these questions, particularly the financial questions, but some of the other questions, not just in terms of an independent recovery plan but also the new world order of competition in the electricity marketplace.

**Mr Bullock:** No, I did not say that, sir. If you understood me that way, it was incorrect. What I was saying was that Ontario Hydro, with the recovery plan for the nuclear facilities, would have debt in the order of just over \$30 billion. It was paying its way down, and it'll go back to that to pay for this nuclear recovery plan. Within the current operating environment which Hydro is faced with, which is not a competitive environment, it has the ability to service that debt. That was the point I was making to you, that on the issue of stranded debt as you were using it, stranded debt by definition is your ability to repay. At least, that's my definition.

**Mr Conway:** But again — and I'm certainly no financial expert, far from it — I'm looking at this corporation and you're laying up a number of reactors that we're told

by the regulator and others could continue to operate. But you can't operate them because you don't have the people. That's basically what Andognini told us, that it was more a human resource issue than anything else.

**Mr Bullock:** And building back the capacity to restart and reoperate those facilities.

**Mr Conway:** But you're looking at a corporation that's going to lay up a third of its nuclear power division, thereby taking out of production, or potential production, significant revenue generation. In its place, you're going to have to go into the market and buy replacement power in the short term. Again, there are a number of people who are saying there are not just environmental problems with that, but there are real cost issues. A number of people have spoken to me, some in this committee, and said, "The Hydro recovery plan is very suspect on these replacement power costs because it's going to be very dependent on a number of issues that no one can guarantee at the present time." Did you as a board feel comfortable that you had all the information you needed to have, that the replacement costs — which are not insignificant if you look at the data in the overall package of —

**Mr Bullock:** The replacement cost of power is the most significant cost.

**Mr Conway:** That's right and it's a multibillion-dollar item.

**Mr Bullock:** The board is well aware of that.

**Mr Conway:** Were you comfortable as a board that Andognini and others had given you the best information on that key question?

**Mr Bullock:** I was satisfied with the level of information, yes. I would offer you one additional thought, and that is that operating 100% of your facilities at 55% to 60% of capacity may not be that much different from operating two thirds of your facility above 80% operating capacity. The math is there. The facilities as they were presently being operated were continuing to deteriorate in terms of their performance.

**The Chair:** We'll start one more round and members can decide if they will take the full 10 minutes each or if you wish to share that. Just let me know as you move through that round.

Just before we start the round, Mr Kerr, there was a statement you made in response to a question raised by Mr Conway and I ask you to elaborate. It puzzles me. The direct statement from Mr Conway was: "Was the board made aware that the Treasurer had been advised concerning the cost implications of the recovery plan?" Your direct quote was, "Not specifically, no." That response seems to fly in the face of a question I had asked earlier, which Mr Bullock had responded to, that goes back to this whole questions of concurrence and the memorandum of understanding. I am puzzled. Do you understand perhaps how I am puzzled by your answer, your response, and what that means, whether there was in fact treasury acknowledgement, understanding about the plan at the time of the August 12 meeting?

**Mr Laughren:** Hydro never tells the Treasurer anything.

**The Chair:** This is the recovery plan I'm talking about.

**Mr Kerr:** This is the Treasurer of Ontario?

**The Chair:** Yes, the Minister of Finance.

**Mr Kerr:** It was a very specific question, so I gave a specific answer.

**The Chair:** I see.

**Mr Kerr:** But in general I'm aware that the chairman of the board communicates after each board meeting with the minister and advises him of what went on at the meeting. It could have been in that communication.

**The Chair:** Was that concurrence before? Was it concurrence after? What form did this concurrence take?

**Mr Kerr:** Concurrence with?

**The Chair:** The recovery plan.

**Mr Kerr:** Oh sorry, I thought we were talking about something else.

**Mr Bullock:** He's asking whether the board had the concurrence of the finance minister with the recovery plan before we made the decision. Is that what you're asking, sir?

**The Chair:** That's what I'm asking.

**Mr Bullock:** Formally, I don't believe we did. Whether the chairman of the board talked to the finance minister before the meeting, I don't know. You asked me if I was satisfied we had met our obligations. I said I thought we had, because what we were setting was a course of action to be pursued here to recover the facilities. There is a variety of costs associated with that which will need to be justified as we go along. The cost of staying the way we were was unacceptable.

**The Chair:** In response to a question about the debt retirement, Mr Kerr, your response was that the debt will probably remain stable and go forward, or words to that effect.

**Mr Kerr:** That's what we've been shown, yes.

**The Chair:** I am troubled by the word "probably."

**Mr Kerr:** When you look at a forecast, the only thing certain about a forecast is that generally it's —

**The Chair:** So there are cost-benefit analyses the committee can have access to and there's a range of background studies that undergirded the meeting and the decisions taken by the board on August 12?

**Mr Kerr:** I presume there was a whole network of the support evidence, but what we looked at was the plan and the evidence that was placed before us at the meeting, unless I'm misunderstanding you.

**The Chair:** Let's go around again. Mr Laughren.

**Mr Laughren:** Mr Bullock, a few minutes ago, in response to a question from Mr Conway, you made a reference to being able to retire the statutory requirements on the debt — and I don't want to put words in your mouth here — based on the assumptions of a world without competition. Did I hear you correctly?

**Mr Bullock:** I believe that Ontario Hydro, left to operate as it is, can retire its entire debt, can deal with its debt load without looking to the province for direct financial support.

**Mr Laughren:** Do you really believe that Hydro is going to operate in the future without competition?

**Mr Bullock:** At this point, sir, what I know about the alternatives is what I read in the newspaper.

**Mr Laughren:** You're usually much more direct than that, Mr Bullock.

**Mr Conway:** I hope you read Bill Farlinger's speeches.

**Mr Laughren:** Yes. Given what Mr Farlinger is on the record as saying, given what Mr Sampson, Mr Harris —

**Mr Bullock:** The decision to change the competitive environment for Hydro in Ontario is not a decision of the board of Ontario Hydro; that's all I'm trying to say.

**Mr Laughren:** I understand that.

**Mr Bullock:** What I was responding to Mr Conway about was mixing stranded debt into this discussion of the nuclear assets. It's an issue of whether you have a competitive environment.

**Mr Laughren:** Okay. But at the same time you and I both know that the board has made decisions based on — maybe I heard you wrong, but it seemed to me that you were saying that Hydro was making decisions based on its statutory debt retirement, and probably other decisions as well, based on the assumption of no competition. At the same time, we all know that competition is coming. It's not there right now, but —

**Mr Bullock:** When it comes, the issue of stranded debt will need to be addressed; if it comes.

**Mr Kerr:** We have made decisions obviously trying to prepare the company for a competitive environment, or we would not have been in support of many of the actions that have been taken by management.

1540

**Mr Laughren:** Let me be very specific then: Can Hydro meet the statutory debt requirements — I think it's 0.5% of the total debt of the corporation per year — if there's competition in the system?

**Mr Kerr:** I would doubt that very much.

**Mr Bullock:** It's unlikely.

**Mr Laughren:** At that point then I presume one of two things would happen: either you're simply in default or you change the legislation. This is statutory, right?

**Mr Bullock:** Yes. I think that any plan to introduce competition has to be accompanied with a plan to deal with the debt structure of Hydro under those circumstances, and deal with such other issues as the obligation to serve, and so forth, in a competitive environment.

**Mr Laughren:** I know the province guarantees Hydro's debt, right? But they don't do it for nothing, either. That's a good chunk of change you hand over to the province every year. I don't know what it is now but I think it's well over \$100 million.

**Mrs Johns:** Mr Chair, with your indulgence, we're just going to ask one quick question each, if that's all right.

**The Chair:** I have been advised that this will be a trio.

**Mrs Johns:** Is that all right?

**The Chair:** Yes. You do not need to hold hands on this. I have now been advised.

**Mrs Johns:** Thank you very much. I appreciate that.

I just wanted to go back to something that was said before. Mr Conway talked about the board and decisions



that it made, I think in the first year you were there, Mr Kerr, in 1992, and how they were — I think he used the word “cataclysmic” decisions that you were making. It seems to me, as I’ve heard throughout the days, that along the line there have been a number of strategic decisions about how to put nuclear back on track. You may have corrected the situation for a few years — and I know neither gentlemen was here — and then it’s fallen back and the board has made different decisions. Is this, in effect, what’s happening here, that the decisions in the past have not worked? The problem has once again come to the board and you people have looked at a decision and believed that this is the right decision to move Hydro forward?

**Mr Kerr:** I’d say that’s a pretty good summation, yes.

**Mr Bullock:** Yes.

**Mr O’Toole:** You’ve been very thorough in your responses. I appreciate that. I have the most trouble with not just the \$32 billion but the full accounting perspective. I think that, being a crown corporation, it’s sort of protected with its liability, even the fact that it doesn’t have to cover itself in insurance for nuclear. For my riding, that’s a huge issue. What happens in the event of some particular site problem? This has been recently in the news.

I want to get to the eventual worse-case scenario — I call it full-cost accounting — and any recovery plan. I don’t have much confidence in it with respect to decommissioning a site. It’s my understanding, and I want you to respond, that if they do decommission a site and, for environmental and other good community reasons, put the site back to greenfield, we’re talking huge, like double the Ontario debt. That’s my understanding. It’s huge, uncosted liability. Right now, Ms Clitheroe told us it was 2% or something per year on revenue that was supposedly put into — well, it was put into debt — to deal with decommissioning of the site. How can they tell me the rates are only two cents per kilowatt to bring this upgrade in when I’m not confident they’ve taken all of the consequences of full-cost accounting into play? They don’t even know how to take the spent fuel cells out of commission. They still store them in a swimming pool.

Can you respond? How can I, looking for a full-cost recovery plan, where this recovery plan to me is a fairly decent number — it represents almost as much as the deficit we have in this province and you know the problems we’re having to just balance our budget, and you’re going to stack that on to somebody else — that’s called the taxpayer — eventually even money we haven’t accounted for. Can you just give me some confidence in this managed accounting environment I’m listening to?

**Mr Bullock:** Maybe I can start. The costs that are discussed in the plan, if expanded, would hopefully result in the facilities being restored to the kind of operating standards we should demand in this province, operationally.

You’re quite correct, though, on the issue of decommissioning of those sites when they’re no longer used, that the reserves that have been put away to date are probably inadequate. I’m not sure the restoration of the operations

and that issue are one and the same, that’s all I’m saying to you. It certainly is a fact that in the United States the decommissioning reserves are built up over time and are more substantial than they are here, and that is going to be a cost to Ontario at some point.

**Mr O’Toole:** Mr Franklin, this morning in his presentation, was talking about the aging process, how this is currently an issue across the world. Aging is the 40-year amortization formula you’ve used to do all this accounting jargon, and it isn’t 40 years. It appears to me that’s somewhat diminished, which increases the cost. That’s my discomfort with this whole number thing.

**Ms Fisher:** Just a little bit extended to that is coming back to the question that was raised earlier, and has been raised with others as well, as it relates to the legal opinion you had with regard to the long-term debt repayment, the whether-or-not-to, long-term debt repayment. By the minutes it shows that the board was advised — mind you, it was in a draft external legal opinion, so I don’t know what that means — by a certain law company that indicated that negative retained earnings are legally permissible. Yet my understanding of the Power Corporation Act — and that seems to be the only link of accountability, if you will, where the government can legally intervene and say, “Hang on here now, you’re going a little bit beyond your mandate.” What was this draft external legal opinion? What was that?

**Mr Bullock:** The opinion was discussed a couple of times, once in draft, once in — I believe Hydro does have in its possession a legal opinion to that effect that’s been shared with the board, as opposed to a draft legal opinion, and they’re one and the same. Having said that, the legal opinion basically says — and I’m not a lawyer; this is a layperson’s interpretation — that if you exercise proper judgement, care and prudence in discharging your responsibilities, and include in that that in your judgement it’s in the best interests of Hydro to have negative retained earnings, then you can go ahead and do it. That’s the legal opinion.

**Ms Fisher:** Regardless of the fact that it has a responsibility under the Power Corporation Act and the appointment of the board?

**Mr Bullock:** If they’ve reviewed the Power Corporation Act and believe that to be the case; that’s what the opinion says.

**Mr Kwinter:** Mr Bullock, in the minutes of the meeting where this decision was taken it says: “Ms Clitheroe supported Mr Bullock’s proposal. In particular, he suggested that financial impacts surrounding the program be further reviewed and challenged by the board.” Has this ever taken place?

**Mr Bullock:** Yes, it did, sir, in the September meetings. That’s what led to the report that I believe Mr Laughren held up here earlier.

**Mr Kwinter:** One of the concerns I have — I’ll give you an example. When we were in government and we came to deal with Hydro, particularly Darlington, some colleagues of mine were of an opinion, and when they were in opposition they expressed the opinion, that they

probably would stop Darlington, and they found out that it cost more to stop it than to keep it going. As a result of that, it went ahead, because they figured that if you shut it down, you had nothing and it was going to cost you more money to have nothing. You might as well put the money in and at least have the power.

My concern is that a minute of the board meeting on August 12 outlines what the decision is going to be, such things as: lay up Pickering A on January 1; lay up Bruce A over the spring of 1998; shut down and decommission the Bruce heavy water plant. All of these decisions have been taken. The caveat that was put in as a result of some of your input —

**Mr Bullock:** Interventions.

**Mr Kwinter:** — and Ms Clitheroe's is that we have to monitor this. We have to monitor the cost on a monthly basis.

**Mr Bullock:** And the progress being made in the recovery plan.

**Mr Kwinter:** And the progress. My question is this: Once the commitment is made — which has been made as a result of this board minute, "This is what we're doing" — you're going to monitor the progress and the cost, but what recourse do you have once you're down that road? We've already heard from the union that the heavy water plant is going to be junked. Once it closes down, you can't suddenly decide, "You know what, maybe we should go back to the heavy water plant." That's gone. Some of these other decisions are irreversible. What kind of control do you have, effectively, by saying: "You know what, these costs are far greater than we thought. We're going to stop it, or we're going to do something else. We're going to go to another plan"? How do you see that happening?

1550

**Mr Bullock:** I think if you break the plan down into its components — you're quite right, you can't keep all the balls in the air and say, "Which way do we want to go?" each month. "Do we want to go another way?" You're going to go down a recovery plan here which should ultimately lead to better operation of these facilities going forward than we've had in the recent past. One of the monitors I would see in there, Mr Kwinter — I don't consider it an HR function as much as the management practices in place at the operating facilities. If the management practices don't improve dramatically over the next 12 months, then it's highly unlikely you're going to be making further investment in restarting nuclear facilities. You're going to be looking for alternative sources of power. That would be my view.

That's an option you have, as you go through this recovery plan, as opposed to simply saying, "Go ahead, Dr Andognini, and we'll talk to you two years from now." I think there are options within the plan. They're not unlimited, but I think it is the plan of recovery that offers you the most flexibility, from what I've seen presented today. To continue to run all 19 as is and try to improve management practices, I think the history of Hydro has shown that hasn't worked.

**Mr Kwinter:** Not only has it not worked, the problem I have is that decisions are being made — and both of you two gentlemen are in the private sector. Notwithstanding that you've both said you think what happens at the board is very much like what happens in the private sector, in the private sector you don't have some Big Daddy guaranteeing your debt. When it comes to the crunch, whether it's taking Darlington from \$4 billion to \$13 billion or \$14 billion, those decisions are not as critical because you know that at the end of the day Big Daddy is there to pick up the pieces and guarantee the debt and that is going to happen. I can assure you that if your money were on the line, you'd be making other decisions. I'm not being critical; I'm just saying —

**Mr Bullock:** Than the one we made, sir?

**Mr Kwinter:** Yes.

**Mr Bullock:** I don't agree with that at all.

**Mr Kerr:** I would have trouble agreeing with you as well.

**Mr Bullock:** Are you suggesting that we'd make a different decision if it were our money? It is our money; we're taxpayers.

**Mr Kwinter:** It's your money collectively, but it isn't your money individually.

**Mr Kerr:** And the company isn't obligated to —

**Mr Kwinter:** Your share of that amount of money is minuscule. What I am saying —

**Mrs Johns:** He makes more than us.

**Mr Kwinter:** I don't care how much he makes. When you're talking about billions and billions of dollars, and I've seen the financial statements of both those companies —

**Mr Bullock:** On a more serious note, I believe that the board members and myself take our responsibility here quite seriously. We're not frivolously spending money because it isn't ours.

Let's go down the road you're talking about. If you ran along as is and shut down the nuclear facilities, the big cost of replacement power is the issue here. These things are not going to continue to operate indefinitely at minimally acceptable standards. You've got to do something. I think the course we chose is the right one.

**Mr Conway:** Just a couple of things. I'm not suggesting that you operate all 19, but you may not decide to lay up seven in the way you have. In fact, there are a number of people around more knowledgeable than I who say, "They're not going to be able to do that, certainly not the way the schedule suggests."

I want to come back to something. I am intrigued by something you, Mr Bullock, said in response to Mr Laughren. I feel somewhat unfulfilled and unsatisfied this afternoon. We had Uncle Maurice here last night and boy, he put on a show. You know Maurice; it's always somebody else's fault. He did everything he was supposed to do and it's some kind of criminal conspiracy that kept key information from him. He's gone; he's off into other deadlines.

You come today, particularly you, Mr Kerr, and this board didn't really seem to know a great deal about what



may have been happening on the personnel side — a critical question — as regards the last recovery plan. But now you, Mr Bullock, say something really interesting to Mr Laughren. You say that on the financial side of this recovery plan, you, and presumably the board, believed you could manage the situation, including the debt, in the current environment but that in a competitive environment —

*Interjection.*

**Mr Conway:** Well, I certainly got that, and that's what my question is going to be. I thought I heard you say to Mr Laughren that you believed that the recovery plan was manageable, particularly on things like debt retirement and the like, in a world as it is now, that if we get into a competitive environment, there will have to be other adjustments or the corporation is simply not going to be able to meet its obligations. Didn't I hear you say that?

**Mr Bullock:** Generally, yes. Would you like me to try and clarify?

**Mr Conway:** No. You've confirmed what I thought I heard you say.

**Mr Bullock:** It's my view, not the board's.

**Mr Conway:** But you're a board member.

**Mr Bullock:** One member of the board.

**Mr Conway:** But we had John Murphy in here. I want some accountability; I don't want infallibility, but I want some accountability. So you're a board member and I accept that.

**Mr Bullock:** Mr Murphy voted for this decision, as did I, sir. I'm accountable for the decision we made. I'm not accountable for my personal —

**Mr Conway:** Did Mr Murphy vote —

**The Chair:** Mr Murphy did not vote —

**Mr Conway:** I don't think Mr Murphy voted for the recovery plan. But my point is, I'm thinking: "All right. Bullock is a smart guy. He's got to know" — everybody at that board meeting on August 12 has got to know, because you're not dolts — "that competition is coming around the corner." That's a given. I haven't met anybody anywhere who doesn't think that between now and the end of this year, if not this decade, competition is going to be here in a real and meaningful way. So I say to myself, why would this board embark upon a recovery plan that has obligations that are going to be difficult for the corporation to manage in the competitive world? Was this our last —

**Mr Bullock:** Let me try and help you, if I might.

**Mr Conway:** Please do.

**Mr Bullock:** Historically, in the recent past Ontario Hydro has had debt levels of around \$30 billion. Is that fair?

**Mr Conway:** It seems to be a bit higher.

**Mr Bullock:** It's reduced its debt down to something like \$25 billion or \$26 billion and has an expenditure here of \$5 billion or \$6 billion, including replacement fuels, to do this recovery program, taking the debt back to around \$30 billion. It has been able to handle its debt to date, and my view is that it can handle the debt in a status quo situation. Now you're saying, "What about competition?"

**Mr Conway:** Just to correct you there, you're right, with one important proviso: You've been able to manage that debt, with a lot of your own capacity in operation, producing revenue. If you look particularly at the 1994-95 period, you're running your plants at full bore in many cases, generating a lot of revenue that is allowing you to bring that debt down.

**Mr Bullock:** When you spend \$3.5 billion on fuel for replacement power, you're obviously going to sell it and get revenue from it. I think that's a reasonable assumption, is it not?

**Mr Conway:** But you're laying up a third of your nuclear assets.

**Mr Bullock:** I'm not going to get into a line-by-line discussion with you on the balance sheet here. I'm saying that the debt associated with the recovery plan is manageable within Hydro —

**Mr Conway:** In the current policy context.

**Mr Bullock:** — and that to the extent that the policy changes and introduces competition — I think you've touched on it yourself — there's an issue of stranded debt or stranded assets, whichever you want to call it, mostly stranded debt, under those circumstances that would need to be addressed.

**Mr Kerr:** As another director's opinion, I would say I'd like to see some more financial numbers before I concluded that we could survive in the current expenditure environment, with the current requirement to deliver power, without competition.

**Mr Conway:** Last question: A reasonable person has got to conclude that Kerr and Bullock and Farlinger and these smart business people were up to more than they're admitting when they approved this recovery plan on August 12. There has got to be another agenda here. You clearly know you're going into a new world order here. You're embarking on a recovery plan that adds substantial cost and debt to the corporation on the eve of something significant happening.

**Mr Bullock:** I suggest that I find that conclusion offensive and not in keeping with my understanding of the role of a director.

**Mr Conway:** I appreciate that you might consider it offensive.

**Mr Kerr:** Nor in keeping with the responsibilities of Ontario Hydro.

**Mr Conway:** But you know one of the responsibilities, presumably, of the Hydro board is not to make major decisions without checking with the shareholder, and that wasn't done in this case. You did not, as a board, think it worth your while to phone up the Minister of Finance or to have a reasonable level of certainty. "Bill, have you talked to Mike or Ernie lately? Do they have a reasonable level of comfort that this plan is going to be acceptable to them?" I can't believe that wasn't done at some level. Whether the board was informed I guess is another matter, but it's inconceivable to me that —

**Mr Kerr:** What did they reply when you asked them that question? What did Bill reply?

**Mr Conway:** We'd have to check the record. What did he tell us? You talk about the board's responsibility. The part I can't believe — if I'm the Minister of Finance for Ontario and I read in the paper that a crown corporation, of which I am the only shareholder, has embarked on this kind of plan, that's going to bring this kind of environmental controversy, that's going to put this corporation in a position of negative retained earnings —

**Mr Bullock:** It's going to increase its debt. Let's not overestimate that "negative retained earnings" are, Mr Conway.

**Mr Conway:** Listen —

**The Chair:** Thank you, Mr Conway. Any final comments? Mr Bullock, I cut off Mr Conway very abruptly some minutes after he had run over his time. Mr Bullock, Mr Kerr, is there anything you wish to add as you complete your testimony?

**Mr Bullock:** The only comment I would make in closing is that I believe that this plan before you is the most cost-efficient plan. The board and Hydro are faced with what I would describe as unpleasant choices here. The restoration of our nuclear capacity in this province is an important issue, and that's what the board was focused on in making this decision, not some of these other things we've debated in the last few minutes.

**Mr Kerr:** I would simply comment that I believe the board did adequate due diligence in the circumstances. I agree with Mr Bullock. We think this is the best plan, in the circumstances, for Ontario Hydro.

**The Chair:** Mr Kerr, Mr Bullock, I thank you on behalf of the committee for attending. If we have further requirement of testimony, I hope you'll respond as generously with your time and attend the committee.

We have two deputants, the Consumers' Association of Canada and the Provincial Council of Women of Ontario. I've been advised that Gracia Janes has to leave just a little bit earlier, so we'll ask if she will make her presentation first. They could both come to the table so we can be prepared to move from one deputant to the other. It will be Peter Dyne and Robert Warren from the Consumers' Association of Canada.

1600

#### PROVINCIAL COUNCIL OF WOMEN OF ONTARIO

**The Chair:** Gracia Janes will be the first deputant from the Provincial Council of Women of Ontario.

**Ms Gracia Janes:** My name is Gracia Janes. I am the vice-president of the Provincial Council of Women for environment. I am also the vice-president, at the National Council of Women level, for housing, environment and public safety. I'm going to use my notes. I apologize, everybody else seems just to have questions, but I would like not to forget anything. You may or not be able to follow my brief that was passed out to you earlier. What I've handed out since is just an enclosure that is a brief

I presented to the phase 3 panel hearings on the disposal of high-level nuclear waste this spring.

The Provincial Council of Women of Ontario, with hundreds of thousands of members from all walks of life, represents the broader public. Established in 1922, today it includes seven local councils from Windsor to Ottawa and a diverse membership of provincially federated organizations such as the business and professional women of Ontario, the Ontario Secondary School Teachers' Federation, the Salvation Army and the Ontario Farm Women's Network.

While we realize that this committee on Ontario Hydro nuclear affairs is not constituted to provide broad public consultation, we consider it to be an opportunity for some vital public input, not just from the experts and those advocacy groups that concentrate solely on the nuclear issue or cheaper power options but as well from groups such as ours, whose diverse membership makes our views a good indicator of public concerns. We have no vested interest and we are not a single-issue group. We deal with health, women's issues and just about everything as it relates to the broader public good.

We are bound by international, national and provincial policy, which encompasses all aspects of the nuclear cycle and has remained steadfastly cautionary on this issue since its first resolutions many years ago. For example, in 1955 the National Council of Women of Canada urged the government to issue an authoritative report on the known and unknown aspects of the potential effects of radiation upon living things. In 1974 we asked that they delay widespread siting of nuclear plants until a more thorough, unbiased assessment of their safety and design is done.

This year we urge the government to reject as unsafe the AECL concept for the burial of high-level nuclear waste in the Precambrian Shield; to initiate a public policy debate with broad public consultation on the energy future of Canada; to expend research moneys on the search for safe technology to treat nuclear waste; to upgrade current nuclear site safety; and to develop alternative sources of energy; to bring Canadian radiation standards into conformity with those adopted by the International Radiation Protection Association of 1990, while encouraging that association to improve these standards even further to reflect gender and age differences of women and children; and finally, to do all that is in its power to prevent the expansion of the nuclear industry.

For its part, the Provincial Council of Women of Ontario requested the province, for instance, in 1978 to shift its investment priorities to energy conservation and the development of renewable energy technologies. This year, we asked them to ensure that nuclear plants are phased out and that sustainable energy strategies and alternative energy sources be key features of the long-term provincial energy plan for the utility. In February this year we presented our brief to the federal nuclear fuel waste environmental assessment panel regarding AECL plans for disposal of nuclear waste.

In light of our strong policies regarding the nuclear cycle and the recent confirmation of our long-held fears



about nuclear safety, our president, Margaret Jackson, sent a letter to the Premier of Ontario in August asking that the government "open up the debate, not just to experts and those who seek to privatize Hydro for profits or to large-scale users, but to the broader public, whose energy future and safety are at risk."

The discussion around the recent findings of the review committee and the safety of existing plants, the closed-shop, corporate culture of Ontario Hydro, the apparent plans to temporarily close some plants and refit for future use, and the province's hints regarding a possible privatization of Ontario Hydro all ignore many important questions in the public mind.

For instance, why are Ontario Hydro and the government of the day not discussing the very real dangers inherent in using nuclear fuel? How do we break our dependency? What about the risks associated with mining and the transportation of waste, the safety at the current sites, the lack of public trust around this issue, the grave difficulties posed by disposal of nuclear waste, and the promotion of nuclear power by the federal government and Ontario Hydro? Why are they not talking in depth with experts outside the nuclear field of the need and the method to be used to move to less dangerous and more sustainable energy forms while maintaining a secure supply of power?

The discussion is moving towards a continued and expanded use of nuclear technology for our electricity needs without a wide-ranging public discussion. Ontario Hydro ads in the national newspapers talk of getting things in shape and moving on. They presume considerable investment in nuclear and ignore any problems.

Behind the scenes, federal policy now makes the generators of nuclear waste responsible for their disposal, and cuts to federal funding have necessitated a partnership with AECL and Ontario Hydro to do so. Internationally, Ottawa sells the technology abroad and there is some talk of the waste coming back to Canada and Ontario for treatment. As well, Ontario's Chalk River plant will burn weapons-grade plutonium on a test basis.

It is difficult to understand why the people of Ontario should trust Ontario Hydro after the recent revelations regarding safety. It's hard to fathom how Ontario Hydro can ignore its past track record and continue to talk of a nuclear future with such confidence. Certainly at the AECL assessment panel hearings last year, the lack of trust from most of the public and many experts was evident.

For instance, nuclear waste transportation expert Martin Rosnikoff outlined the serious flaws in Ontario Hydro's plan to transport nuclear waste. Citizens wondered how Ontario Hydro could promise shutdowns of plants and greenfields and yet continue to promote nuclear into the future. Scientist Rosalie Bertell questioned the standards for nuclear emission and public exposure, which at 1977 levels fall way behind the 1990 international standards.

## 1610

The challenge is to move into the next millennium with a safe, reliable power system in place for Ontario. First, however, Ontario Hydro must recognize its faults and be determined not to repeat them, and the government must take a leadership role through legislation in steering the way. The final responsibility for such a vital issue must lie with the elected representatives and must reflect a broad public consensus. Such a consensus can only come through wide-ranging public debate.

The discussions must look closely at issues such as the interim proposals for an adequate supply, which should not further pollute the environment or be unsafe; the significant role energy conservation might play; the need to reduce exports; the potential of other hydro sources; the growing potential of wind, solar and cogeneration sources; and the responsibilities: the need for strong regulation; dangers; and the enormous full costs of any continued investment in nuclear power.

The most significant caution around the current situation lies with the likelihood that Ontario Hydro has not learned from its mistakes and is still determined to renew and expand the role for nuclear power. Hydro, having cancelled its energy conservation program in 1993, downplays the role of energy conservation and alternative technologies. It highlights the presumed need to turn to dirtier solutions. This underplays the nuclear dangers and the minuscule role that nuclear plays in reducing CO<sub>2</sub> and presents a false choice of either the dirty technology or the nuclear.

A complicating fact is the provincial government's trust in the private sector to solve everything. This thinking was front and centre in the 1996 Macdonald commission report. While the report did not recommend privatization of the nuclear stations at present, its terminology in some cases certainly pointed in this direction. Currently in Britain, private firms are operating nuclear plants and now have partnerships with American firms. I believe that tomorrow you will be hearing from one of these firms, the president or whomever.

Other components of the system are most definitely favoured for privatization and there are fears that cherry-picking by the private sector will go on, with nuclear assets being stranded and their debts and costs of decommissioning paid for by the public. The Provincial Council of Women of Ontario cautions that the Macdonald commission plans for privatization of our system are quite revolutionary. Few jurisdictions have tried this fully open electricity exchange system. Those that have are only a year or two into the change, and that comes from the Macdonald report. There have been some major power disruptions attributed to this.

We also bring your attention to the lack of public trust in the private sector as far as safety is concerned. We do not ignore the lack of provincial regulation to date and the grave dangers we have just begun to uncover regarding Ontario Hydro's operations. Nevertheless, we observe that the privatization of water in England, where profit is the bottom line, has led to many safety infractions by

water companies and to a substantial drop in public trust in the industry.

In conclusion, the Provincial Council of Women of Ontario urges this committee, in fully exploring the issue of Ontario Hydro's nuclear track record and future, to measure it against the following questions: How can we best overcome the reticence of Ontario Hydro management and the nuclear industry as a whole to admit the dangers of nuclear power? How can we break Hydro's dependency on nuclear expansion that has put the public in danger in the past and has precluded the use of alternative sources of power? What are the true costs of rejuvenating the nuclear plants, and would it not be better to invest in alternative sources of renewable energy? Why did Ontario Hydro promise greenfields within 50 years to station residents and yet continue to promote nuclear rejuvenation and expansion? As partners with AECL in the disposal of nuclear waste, how can Ontario ensure a safe solution? The public has a right to be involved fully in the discussion of its own future; how can this be achieved? Finally, how should the provincial government take a lead on this issue that is of such importance to its citizens? Will the public be fully engaged in the upcoming white paper on Ontario Hydro's future, and will the debate be framed to fully encompass the issue the public finds important overall: a safe energy future?

I also have a little plan. You were talking about plans. I think Mrs Fisher was talking about plans. I won't go beyond our policy but I will look at some practical ideas. This is not in the brief. I think this committee's role should be expanded, as was the role of Donald C. MacDonald when he first started looking at just hydro rate increases, and he came to look at the whole issue over a period of many years. It is an extraordinarily important situation and it's our whole future. There's a lot of danger involved. There's a lot of uncertainty. There are a lot of unknowns. I think this committee should have an expanded role including, perhaps, taking a look at possibly phasing out nuclear.

Regardless of whether you do or don't, I think we have to find out about the safety and make sure the current sites and the sites that are being closed down are safe. We have to get all the facts in the open. We have to know the important role of the alternatives and energy conservation. We have to have some of these experts talking at length. How much power do we really have? Hydro says there's no problem, that we're okay, that we'll make it this year. We want to know how long we've got.

We must open it up to the broader picture. There are joint responsibilities with AECL so you have to look at those. That is your responsibility now under federal government policy in the framework. You have to get rid of what you produce, so this is an ongoing thing. I think somehow you have to find ways to open up the Ontario Hydro board to perhaps an independent or joint board, some kind of mixture, a hybrid. There is a culture, you know. It's not just this management that's closed. It's a whole nuclear industry that's really closed. If you had been at the hearings last February, and before that at the

federal level, you'd have seen this. There is a really closed point of view and there's very little room for anybody to come in from outside and show a different picture. Even experts had trouble.

I would like to see legislative changes to ensure the openness at Hydro and we want broader stakeholder participation. Above all, we want wide-ranging public hearings. Last, I leave you with this thought: We want to know why this rush. Is there really a crisis or can we believe Hydro that there's enough power there and that we have time to look at the alternatives? Very last, just keep in mind that nuclear is not benign. We can't put our heads in the sand and say that it is. It's not a toy for the engineers. The public must be involved in its own future.

**Mr Laughren:** Ms Janes, I appreciated your presentation. It was thoughtful. I think what's bothering a lot of us — I've never met anyone outside the corporation itself who loves nuclear. There's a nervousness and a jumpiness about it. But as we head now into an era when Hydro has to sort out its problems, there seems to be a sense that we can't live without it. You can't live with it and you can't live without it. I've heard that applied to other things in this world.

**Mrs Johns:** Men.

**Mr Laughren:** I didn't want to say men or women.

I'm wondering whether or not you feel that we really can move now to a nuclear-free world, given what the alternatives are. You have to be realistic about the alternatives. Does that mean fossil fuel, which has all sorts of other problems? Most people I've talked to say that the truly benign alternatives like hydraulic and wind and solar won't fill the gap. I'm wondering to what extent you are comfortable that you can move in the direction you imply in your presentation.

**Ms Janes:** I can say that we have been talking about this for an awfully long time. Even when we first started, our first resolutions talked about a phase-out. We didn't talk about something sudden. I guess the danger of this situation is that suddenly you have shut down seven plants and it seems like an amazing crisis. I think if we could be assured that there is enough power there with the remaining plants to keep going and that we could be assured of the safety of the existing plants and those that are going to be phased out, we must take the opportunity — there is no either/or — of looking. We've never looked fully at the alternatives. We really never have.

It's just like the automobile industry. Up until recently, they've completely shut out anything but gas and oil and such, but today I read that Ballard has found a new kind of fuel cell and they are using a new system that is going to be absolutely pollutant-free. They are willing to get into that frame of mind and I think we have to get into that frame of mind.

**1620**

We also seem to ignore energy conservation. I think one of your witnesses today or tomorrow, Bruce Lourie, who has been part of the Canadian Energy Efficiency Alliance, said that anything between 10% and 50% of the power can be replaced by energy conservation. There are



experiences in the States — it's either in California or Washington; I get them mixed up — where they have gone to the energy conservation mode, and I think it's the fellow who is the director who was down further south in the States, he's from Sacramento, California, and he moved up to New York state and he refused to take power from Hydro-Québec because he knew they could do some energy conservation if they really put their minds to it.

**Mr O'Toole:** Thank you very much, Ms Janes, for a different perspective on the hearings. I've kind of reminded myself that the mandate of this committee is basically to review and be reassured of the safety of both the existing and the recovery plan in IIPA. We've heard from many people who represent a particular perspective. Mr Andognini assured us — that was a question very specifically directed to him — that the current status meets the standard or whatever the measurement was, that it was safe for my constituents, indeed for all the people of Ontario.

We also heard from Dr Bishop from the AECB pretty much saying the same thing, with some caution. She was formidable, actually, I think as one of the presenters to the committee. You've asked the question, is there enough power? You seem to be concerned that the 20,000 megawatts or whatever it is we need — do we have enough? I guess the solution to ensuring that for the future of all of Ontario, indeed our lifestyle, is an important part of this discussion.

I've heard from other presenters much like yourself — I'm just looking through here — from Energy Probe, and we've heard from the Ontario Clean Air Alliance — of the requirement to look at alternatives to nuclear. I suspect that debate has been going on longer than this committee has been going on, before they built the plants. I hope that isn't kind of the agenda here, to say — but if I look at the choices, I put to you, even as they reviewed the recovery plan there was fossil and there was natural gas fired, all of which created some kind of effluent or particulants, all of which are harmful. Wood burning was mentioned here and energy from waste. Do you know of any form of energy creation, the machinery, technology or byproduct of same, that's environmentally friendly?

**Ms Janes:** I just spoke of one that I haven't read thoroughly. I just saw it briefly as I came in, about the Ballard fuel cell and the separation of hydrogen —

**Mr O'Toole:** But that probably has attendant dangers too.

**Ms Janes:** It's not running yet. Nothing is running yet. If you just sort of dig your head in the sand and say, "We must go with what we've gone with before" — we've heard these questions and answers for many years. Meanwhile we've ignored the dangers, and look where we are at. We've overextended in nuclear. We're one of the most dependent in the world next to France, and we shouldn't have been.

**Mr O'Toole:** Well that's a choice.

**Ms Janes:** Even Maurice Strong, who is perhaps more knowledgeable than I, indicated according to the Globe this morning that alternatives should have been looked at

in more depth. It's always looked at very superficially and it's always looked at with a bias.

**Mr O'Toole:** I have one other area, just a couple of words I want to clarify. I know you wanted time to explain them. We've heard from three of the CEOs, current and past, Farlinger, Strong and Franklin. They all suggested and recognized that competition is both beneficial and unavoidable. What's your view with respect to the competition, the regulation framework and the whole restructuring, the Macdonald recommendations?

**Ms Janes:** Our policy as of this June 2 is that we wish Ontario Hydro to be kept public. Having read the Macdonald commission report and knowing one of the members and debating it at length, I don't think that privatization and competition are this panacea that everybody looks at. They're not.

**Mr O'Toole:** Therein is the conundrum. Ontario Hydro as it exists today — we just heard from the society, CEOs and the two board people just before you. I'm going to go back a bit here. Some of the characterization has been the culture. Some have used the words "cult," "élitist," you said "impervious" or "closed"; you used the word "closed." If you want to maintain Hydro and you've heard their choice is nuclear, isn't that kind of conflicting? You want to maintain Hydro the way it is and their choice — some of the alternatives are the smaller fuel cells —

**Ms Janes:** We've not said that. We said we want to move to alternative sources. We've asked to open up Hydro, to make it more accountable to people, to have a broader sector involved in it and have it work for the betterment of the people of Ontario. I sat on the Ontario Place board for six years and as members of that board we came from all different walks of life and we had to find our way through. There needs to be an independence and a separation from this nuclear closed circle, and we feel there's no contradiction. We've been saying for years that we wanted Hydro to be opened up. We want the alternative forms to be allowed in. We wish cogeneration to be private sector, but not privatization.

**Mr Kwinter:** Thank you. Ms Janes. We've spent a lot of time today talking about a letter the minister wrote to the chairman of Hydro in which he says that you can appreciate that the government expects all options will be thoroughly evaluated and assessed before a decision is made. My interpretation, and I think some of the members on this committee's interpretation, was that it means what it says: that all options will be canvassed before a decision is made. Today when we questioned members of the board I asked them specifically if their interpretation was all options or all nuclear options. They said it was all nuclear options.

**Ms Janes:** I heard that too.

**Mr Kwinter:** As a result of the huge amount of money that's been invested, as a result of over 60% of our energy requirements being provided by nuclear, it seems to me the decision has already been taken, certainly by Ontario Hydro, that whatever solution there's going to be, it's going to be within the nuclear context. Do you feel that?

**Ms Janes:** I think they're taking advantage of the crisis, yes. I think they're taking advantage by moving further into nuclear, by saying that you can't do without it, and then maybe we're going to see this privatization white paper unfold. I'm not sure.

**Mr Kwinter:** Okay. Given that scenario, and hopefully that isn't the scenario entirely, although I want to make sure it's understood that it may be the only scenario that makes any sense — I haven't decided that yet because I haven't heard all the counterarguments — given the fact that this could be the scenario, and certainly from the testimony of the two members of the board that is the context the Hydro decision is being made in and their monitoring is going to be not to see whether there should be an alternative but whether there should be alternatives within the nuclear solution, what recommendations would you and your organization make?

**Ms Janes:** I think we may be caught in a box. All the decisions nowadays are being made very quickly. I really, truly believe that this is one issue we cannot look at quickly. We've talked about it for a long time. There's a long time into the future we have to think about. We have to look at the native groups that spoke at the panel hearings and talked about seven generations into the future. You can't do this quickly. I think you have to take hold and make recommendations to the government, as I said at the beginning, to broaden the mandate of this committee, open it up to broad public consultation, get all your facts together and not just have this hit and miss of whoever might get here in these few days. It's too big for that. I think there's a lot of information out there about alternatives, about gradually phasing in alternatives and about energy conservation that can be delved into and could help you find your solution.

**Mr Kwinter:** The practicality is that this committee has been given its marching orders. It has its mandate, it has its reporting date, and notwithstanding that I might be very supportive of what you're proposing, the reality is that it's not going to happen. We are dealing with a committee that has had its terms of reference very carefully defined. As I say, we already have a reporting date, which is December 1. This committee is going to be making a report based on its mandate and its time constraints. What I'm trying to get from you and from your organization is, given those constraints, given all the things I've recounted, what suggestions would you make as to how we can make the best of what you might consider to be a bad situation?

**Ms Janes:** It is a bad situation. First of all, the letter: I think you have to interpret it the way you wish to interpret it, which is that the minister asked that all alternatives be looked at. I think you have to insist that the parameters of the white paper be inclusive so that the broader public can be involved. I don't think it hurts to reach for the moon. I don't know what happened when Donald C. MacDonald's mandate was extended several years, from just looking at the rates. There was a crisis at that time, I believe. There was a supposed shortfall in the Hydro output and that commission found that indeed there wasn't a shortage.

They looked at it and found that. I think it's worth a try, if you can ask.

**The Chair:** Thank you very much. We appreciate it. I know that you are trying to get away a little bit early so we brought you forward.

1630

#### CONSUMERS' ASSOCIATION OF CANADA

**The Chair:** I appreciate the Consumers' Association of Canada waiting and moving up to second on the deputation list. Peter Dyne and Robert Warren, we welcome you to the committee.

**Mr Peter Dyne:** I am a volunteer speaking for the Consumers' Association of Canada. We talk in the interests of residential consumers, and in the context of what was said earlier, we are Big Daddy who pays for all this.

The Consumers' Association of Canada is a national association of volunteers dedicated to bringing the interests and concerns of consumers to the attention of government and industry. CAC is a vital communications link between consumers and other stakeholders on all marketplace issues.

You have my CV. We are a volunteer organization. I am one of those volunteers, a retired scientist-public servant. I might add to the CV which you have that in the late 1960s I worked as an AECL employee with Ontario Hydro on chemistry problems during the startup of Douglas Point and Pickering. I must emphasize nevertheless that neither I nor CAC hold any brief for or against nuclear power.

CAC's starting point is that electricity is an essential commodity. Security of supply is paramount. The province and Ontario Hydro have fiduciary duty to the residents of this province to ensure that this essential commodity is delivered safely, reliably and at a reasonable cost. If they fail, they must be held accountable. Residential consumers will have to pay the largest part of the costs of correcting the problems at Ontario Hydro. We are thus vitally interested in a clear, unequivocal outcome to your deliberations.

Dr Kupcis commissioned the IIPA to find out why Ontario Hydro's reactors were operating poorly, perhaps 60% availability by comparison with 95% in the early days of the Bruce plant. A cruel summary of this report might read:

"The operation and maintenance of the plants is not properly done.

"The staff at the reactors do not recognize this nor appreciate the gravity of the situation.

"Senior management also did not know or realize the gravity of the situation even though the problems are of long standing, predating Maurice Strong's reports." They were mentioned in the Hare report. I gather you are meeting Dr Hare some time later, and he will be a very good witness for you.

"There also exist fundamental management problems which make it difficult, if not impossible, to rectify, without significant management changes, the problems."



CAC has two broad concerns. The first is whether Ontario Hydro has proposed the best response to the IIPA findings. The second is whether, at a broader level, fundamental changes in the management and control of Ontario Hydro are required.

This committee and the residents of the province need to be satisfied that Ontario Hydro's response, the NAOP, is the best response to the problems which are identified in that report. This committee and the residents need to be satisfied that Ontario Hydro has canvassed all of the available alternatives, and needs to be satisfied that there were cogent reasons for rejecting those alternatives.

This committee has rightly concentrated on the safety implications of the report. In the nuclear business, safety can never be compromised. CAC's reading of the evidence is that a full response to the IIPA recommendations should ensure that public safety will be protected.

But more explanation is required to show how the \$1.6-billion nuclear asset optimization plan assures better performance. The plan appears to consist of doubling up the staff at Pickering and Bruce and retraining them. If the problem is that preventive maintenance has been neglected, there would surely be major capital expenditures: new pumps, valves etc. There must be an infusion of capital for non-maintained infrastructure.

While the NAOP is necessary, it has not, in my opinion, been shown to be sufficient. I would suggest that the committee needs to know more about how and why 95% reliability was obtained at the Bruce plants, what were the reasons for the decline, and what it will take to reverse it. You have a 1991 statement by Elgin Horton, manager of Bruce, admitting to being "humiliated" — an extraordinary word — by their problems and not being able to do what they, the AECB, said. I think Elgin knew how the 95% availability had been attained and was frustrated that he could not continue to deliver. Was this because of money, manpower, technical problems, preventive maintenance? We need to know.

In his quarterly report, Mr Farlinger said in the context of the NAOP, "We will maintain our pledge not to increase average rates to the end of the decade." He did not, however, say this to you. Ms Clitheroe said to you that the NAOP can be financed internally by slowing down planned debt reduction and that in some scenarios Ontario Hydro could not meet its statutory debt retirement requirements.

This an extremely serious position. Ontario Hydro's financial health and the possibility of restructuring to operate in a competitive environment depend on its paying down its debt and on the way in which stranded debts are to be paid off by ratepayers or taxpayers. While it may be politically convenient to finance NAOP without a rate increase, it may nevertheless be imprudent, even irresponsible. Residential consumers deserve more than a mere financial sleight of hand. They deserve to be told the truth about Ontario Hydro. Residential consumers are mature enough and responsible enough to accept a rate increase if it is necessary to ensure the long-term viability of Ontario

Hydro and the safe and reliable delivery of an essential commodity.

There must be public review of the data to be satisfied that the NAOP is the best approach and to be satisfied that Ontario Hydro can and will make the necessary management changes, and that this all can be done without a rate increase, which we question.

I turn then to the broader issue of whether fundamental changes in the management and control of Ontario Hydro are required.

As the committee will be aware, Ontario Hydro is not regulated. It is accountable to its board of directors and ultimately to the cabinet. While it must advise the OEB of any proposed rate changes and while the OEB holds a public hearing and makes recommendations, Ontario Hydro can ignore those recommendations. Indeed, it is clear and on the public record that Ontario Hydro almost always ignores the recommendations of the OEB in circumstances where it disagrees with them. The OEB hearings provide a window on the management of Ontario Hydro, but the public can have no satisfaction that the OEB's analysis and recommendations will ever be followed.

Given the importance of the fiduciary duty which Ontario Hydro holds to, among others, the residential consumers in Ontario, there must be some body independent of Ontario Hydro that ensures that this fiduciary duty is fulfilled.

Mr Andognini made an important observation on the operation of the nuclear plants which bears on the options for restructuring Hydro. Maurice Strong restructured Ontario Hydro Nuclear into three independent competing units: Bruce, Pickering and Darlington. Macdonald recommended that these three units be operated by separate independent crown corporations to reduce the market power of a single nuclear company. Now Mr Andognini has said to you that "another major blow hit OHN when they," Ontario Hydro, "did a decentralization program and put the three sites in competition with each other. That caused duplication, triplication and quadruplication of effort and the misuse of resources."

The message is that competing nuclear business units don't work. Whether the competitive model which dictates that there may be competing nuclear business units is in the best interests of Ontario and the public of Ontario must now — excuse me. Let's unscrew this a bit. It is an extremely good question as to whether or not you can have three competing nuclear units. The people drafting this white paper and the government should be aware that it is a serious question.

#### 1640

The fact that the IIPA report had to be commissioned at all shows that senior management also did not know or realize the gravity of the situation. The province, taxpayers, ratepayers cannot tolerate a publicly owned corporation whose senior management does not understand and appreciate what is going on in all its activities.

There is a broader concern. There is no reason to suppose that Ontario Hydro's senior management are any

better informed about any of their other activities. An internal study to address this now is just not good enough. In this context, I would like to draw your attention to the OEB report, HR 22, on the hydraulic operation, the power dams and so forth:

"In its business plan, the hydraulic business unit claims that historical spending patterns have led to the harvesting of assets and increased backlog in maintenance and reduced reliability."

It further states that this situation has continued with no improvement. So there is another issue. I realize it is beyond your immediate frames of reference, but it is there on the record.

CAC has consistently argued that Ontario Hydro must become a regulated utility, not a self-regulated utility as it is now. Given the fiduciary duty which Ontario Hydro holds to the citizens of Ontario, there must be some independent body that ensures that this duty is fulfilled.

The first and essential step is to amend the Ontario Energy Board Act to make Ontario Hydro subject in all respects to the regulatory supervision of the OEB. Such regulatory supervision is the norm in every other jurisdiction in North America. Ontario Hydro is an anomaly. Its anomalous status should end. By having the OEB regulate the affairs of Ontario Hydro, the public will be assured that there is an independent, critical analysis of whether Ontario Hydro is fulfilling its fiduciary duty.

Giving the OEB the authority to regulate Ontario Hydro will require the government to commit sufficient resources to the OEB to allow it to carry out that responsibility. CAC is quite aware that this government's ideological bias is away from government regulation. Unfortunately, however, the IIPA report makes it clear that independent regulatory supervision is absolutely essential if the public interest is to be protected. The OEB has the public confidence and prestige to perform this oversight. They will, however, need significant resources to perform this very difficult task.

CAC recognizes that regulating Ontario Hydro is not a panacea. It is, however, an essential first step to re-establishing public confidence in the management and control of Ontario Hydro. It is, CAC hopes, the minimum result to flow from your deliberations.

In summary, the public needs to be satisfied that NAOP is the best solution to the problems identified in the IIPA report. The complexity of the issues and their importance requires a full public examination of the available alternatives and the costs and benefits of pursuing them.

Second, strict regulatory oversight of the management of Ontario Hydro is essential if residents and the government are to have any confidence that Ontario Hydro is acting responsibly in the public interest.

**Mrs Fisher:** Thank you for your presentation this afternoon. I would like to ask you if you could further expand on where you feel the shortfall of the recovery program in the IIPA report might be. I certainly acknowledge your warnings, if you will.

**Mr Dyne:** The recovery plan essentially says, "We will retrain all the staff." The staff at Bruce way back in

1980, when it was working at the top of its form, were motivated and keen and enthusiastic. They knew they were the best, and they were going to keep it that way.

What the IIPA report says is that the current staff of the nuclear reactors are not that sort of people at all. Plainly the first necessary step is that the staff have to be retrained and motivated so they have that attitude of mind. But if there are technical problems — valves that need to be replaced, whatever — that has also to be done. I cannot believe that simply cheering up all the staff with a rah-rah activity will solve the problems. The plan submitted by Ontario Hydro just doesn't address that clearly.

**Mrs Fisher:** I absolutely agree with you. A point I made earlier this morning to both of the labour groups, and I would make it also to the Ontario Hydro recovery plan, was that a major absence is how you change that culture or that mentality or that working atmosphere, if you will, so that this — I like your word — cheering up happens.

I happen to recall the Bruce when it was cheered up and it did perform at over 90% productivity levels. I agree with you that something has changed. Can you put your finger on what that change is and how you, if you were the one being able to make that decision tomorrow, would recover that cheering-up attitude or that quality/productivity issue?

**Mr Dyne:** The cheering up depends first on having a plant which they can really operate. I alluded to what Elgin Horton said as being humiliated that he couldn't deliver. There is something there which has not been exposed to the committee: what happened in 1980 which changed the way Bruce was operating so that there was a gradual decline. That's a matter of looking at history, and I feel that is a good question for the committee to address.

Again, a person like Elgin Horton could tell you in the mechanical, operational terms. We need that sort of input to understand all the hardware problems etc, given that all the personnel problems have also to be addressed.

**Mrs Fisher:** Is it lack of incentive programs or is it —

**The Chair:** Thank you, Mrs Fisher. Good question, though.

**Mrs Fisher:** Well, it was going to be.

1650

**Mr Kwinter:** Mr Dyne, in your presentation to us, the CAC's position, and I assume their paramount concern, is that electricity is an essential commodity and that it be delivered safely, reliably and at a reasonable cost.

**Mr Dyne:** Yes.

**Mr Kwinter:** I'm sure you heard my comments to Ms Janes. I certainly got the impression from talking to two members of the board today that they did not canvass other than nuclear solutions, that their interpretation of the minister's letter is that he wanted them to examine all options — their interpretation is that "all options" were all nuclear options — and that their only concern is whether or not Mr Andognini's options, whether it be number 5 or number 6, are what they should be addressing.

The other part of that equation is that they seem to be going the nuclear route but they haven't got a total fix on



what it's going to cost. Mr Andognini said that he's still plumbing the depths of the problem.

**Mr Dyne:** I heard him, yes.

**Mr Kwinter:** We have a situation where we don't know what the impact is going to be on the financial structure of Hydro as a result of that and we don't know what impact that's going to have on rates. Do you have any thoughts on that?

**Mr Dyne:** In the short term, and by the short term I mean the next three to four years, with what Hydro has done in taking out Pickering A and Bruce A, the existing nuclear plants have to be cheered up and have to be run at maximum capacity. There is no practical alternative to that.

On the question about what happens with Pickering A, Mr Andognini gave quite startlingly low numbers of what he thought Pickering A could deliver if it was cheered up, but that is something we will know three years hence when we find out whether or not the existing plants can be cheered up.

It's true that if we were building Ontario Hydro today from scratch, we would build a very large number of gas-fired plants, and I suspect from scratch we wouldn't even build any hydroelectric plants because the environmentalists would stop us. That's true, but that's an academic argument. We have the investment in the existing plant. As taxpayers, we have to get the best value for money out of the existing plant. The recovery plan is couched in those terms. But having said that, what are the full costs of that and whether it will be effective are not known. Whether it will be effective, we will have to wait two or three years.

**Mr Kwinter:** In the same area, one of the things that Macdonald is recommending — there seems to be almost universal acceptance that we're going to be entering a competitive regime in the supply of energy. One of the observations that Macdonald makes is that there's got to be a level playing field. By that, he says that Ontario Hydro has its debt guaranteed by the province, which puts it at a competitive advantage; it pays no taxes, which puts it at a competitive advantage. He is calling for there to be a level playing field, which means, not a level playing field and everything's going to come down, but it would seem to me, just on the facts, that it should go up. Those who are advocating competition and privatization are saying: "No, that's not the way it's going to happen. Once you get the competition, the price is going to come down." Do you have any observations on that?

**Mr Dyne:** Macdonald made the observation, in my opinion dead right, that if you're going to have competition, there has to be a level playing field, so that the publicly owned parts of the utilities pay taxes and make a return on their investment. Inevitably that leads to an increase in costs.

The other point is that in order to achieve that, a large amount of the debt has to be moved to one side and has to be financed. Macdonald proposed in his appendix a stranded asset charge, which is essentially a tax on electricity. I agree, if you're going to introduce competition, that has to be done. But the question which has not been

addressed publicly to my knowledge is how much that stranded asset charge is likely to be and also how a government is likely to get re-elected if it introduces such a charge. But that's a detail.

The real financial and rate implications of the Macdonald structuring have not been fully discussed, in my opinion. I do not know what the implications are.

**Ms Frances Lankin (Beaches-Woodbine):** I'm going to follow up on that question. I think you're right: We don't have enough implications of what that would mean and there would inevitably, in the first phase, be an increase in cost.

One of the things you've indicated as sort of the basic principle you work from is that electricity is an essential commodity. I believe your organization is also very interested in rate equity between classes of energy users, electricity users. It seems to me that in that competitive basis, in most other models I'm aware of, there become incentives in terms of volume use and other sorts of things, something which Hydro has been attempting to move to but hasn't been able to do effectively because of the Power Corporation Act and the restrictions on equity issues between rates of payers, but a move towards discounting industrial users for economic development purposes and a resulting need for the residential user to pick up the additional costs of that.

Do you have opinions on that issue with respect to where we're headed?

**Mr Dyne:** We are very concerned about that, and all we can do is to make the general statement that when it's structured, custom and rate equity have to be addressed. In the US with privately owned utilities in the gas utilities, the regulatory agency said: "Go ahead. Fine. Give introductory reduced rates to large industrial consumers. But you do that at the shareholders' expense, not the ratepayers' expense." That proposition is entirely acceptable under those circumstances.

The problem we have in Ontario is that the residential consumers are also the shareholders and there's a basic conflict.

**Ms Lankin:** Can I follow up then on that question, because that really leads to the secondary. I appreciate the answers you gave to my colleagues' questions around your concerns on the recovery plan, so I won't pursue that.

Your second major recommendation is with respect to the issue of regulation and making the Ontario Energy Board an effective regulator of Ontario Hydro. I'm interested in your views on what role an organization like the Consumers' Association should play. As I understand it, in the States in many areas there is legislation which allows for utility-based consumer associations to form, that those organizations are financed through voluntary contributions through the ratepayers' billing system, and that they therefore are financed and can play a more active role on behalf of utility users or shareholders than is the context in Ontario.

Would part of your recommendation with respect to more effective regulatory oversight of the management of Ontario Hydro be to build in an enhanced role for a rate-

payer/consumer association watchdog to become an effective player at oversight?

**Mr Dyne:** Simple answer, yes. But the business of a consumers' association getting funding to keep Mr Warren here in heat, light and sound is a very important issue. At the moment, we can recover costs when there is a hearing. This particular operation will possibly be financed by CAC. It's a \$60 train bill. It's peanuts.

If an organization is going to intervene and participate, those costs are significant. It's an absolute waste of time for organizations like ourselves to intervene without having skilled attorneys like Mr Warren and being able to retain expert witnesses. That requires big money. I can't help it; it requires big money. Without adequate financing somehow or other, or some access to that, essentially we're going to be dead in the water.

**Mr Robert Warren:** Can I just add to that this perspective? There has been some discussion in reviewing Hansard about the costs. One of the members of the committee asked a question about the costs of the OEB proceedings. CAC participates, and we recover our costs for doing that. Those costs would be perhaps \$20,000 for full-time participation in a hearing. Those are the best dollars in the public interest you can imagine, because in proportion to the burden which Ontario Hydro's expenditures place on the taxpayers of this province, that kind of full, searching public inquiry is relatively, indeed absolutely inexpensive and a tremendous benefit. That's one of the critical features of having effective regulatory oversight in our view.

**The Chair:** Mr Dyne and Mr Warren, I appreciate your testimony very much. We appreciate your attending upon the committee and we will obviously revisit your deputation with great interest. Thank you for your time and interest.

1700

#### MOHAN MATHUR

**The Chair:** I remind the committee now we turn our attention to Dr Mohan Mathur, board member of Ontario Hydro, who will now approach the committee and give evidence. Dr Mathur, please make yourself comfortable. As soon as you are ready, please identify yourself for the purpose of Hansard, and then we're in your hands.

**Dr Mohan Mathur:** My name is Mohan Mathur. I am dean of engineering at the University of Western Ontario and also a member of the board of Ontario Hydro.

By way of introduction, I want to give you a little bit about my background. As I mentioned, I am dean of engineering at the University of Western Ontario. I have been at the University of Western Ontario for the last 10 years, starting in 1987. Prior to coming to the University of Western Ontario, I served for a little over 18 years at the University of Manitoba.

I am an electrical engineer by profession, and my research area is electrical power systems. In my research I work primarily on transmission innovations which attempt

to maximize the amount of power transfer capacity on given lines by using very innovative techniques.

I have some exposure to industry as a part of Manitoba Hydro's purchase of high-voltage DC from Europe. I spent a year with the Brown Boveri, Siemens AG, Telefunken consortium, and brought the technology home and participated with Ontario Hydro, Teshmont Consultants and Federal Pioneer to put this Bi-pole 2 in operation.

After coming to the University of Western Ontario in 1990, I was invited to join the board of Ontario Hydro, and I have been on the board ever since. I have served in various capacities at the board. I have been the vice-chair for several years. I served on various committees of the board. All these committees were related primarily to the technical aspects of Hydro's operation. I served on the technical advisory committee from 1991 to 1993. I served then on the power systems operations committee. That was a time of transition, and the technical advisory committee's role and mandate were merged into a new committee, the power systems operations committee.

I chaired the health and safety committee of the board in 1995 and joined the nuclear safety review committee when the power systems operations committee was redesigned to deal with the nuclear issues.

In 1995, there was a restructuring of the Hydro board committees once again, and the nuclear safety review committee was replaced by the nuclear review committee. I served on that committee and became its chair on May 13, 1996.

That's my background. I have also served on corporate governance and human resource committees. In my capacity as a member of the nuclear safety review committee, I also had an opportunity to chair an ad hoc committee which at one time examined the future of Bruce nuclear station.

**The Chair:** Are there any other comments you wish to make, or would you be ready now for questions?

**Dr Mathur:** I'll be very happy to answer questions to the best of my ability.

**Mrs Johns:** Thank you for being here today, doctor. The first thing I want to draw attention to, mainly for Hansard, is that we now have had three board members: one, yourself, appointed by the Liberals, one appointed by the NDP and one appointed by the Progressive Conservative government. We have seen a wide range of appointees, and I certainly was impressed by the calibre of them from all sides, so let me say that first.

I guess I'm assuming your calibre because you're a dean of a faculty of engineering science, so it seems to me that you come to us —

**Mr Conway:** I thought you would want to add, for the record, at Western.

**Mrs Johns:** At Western, close to my home town.

**The Chair:** Actually the university began from Huron College.

**Mrs Johns:** That's right, and we all love Huron.

Let me start by saying that you bring to the board a significant amount of technical knowledge. Other people bring other expertise, but you bring technical knowledge, I



expect with some very specific knowledge of the nuclear area. Is that true?

**Dr Mathur:** My personal specialization is not in nuclear engineering. As I mentioned before, I am an electrical engineer and I have a fair understanding of the power system operation. As an engineer, it's not too difficult to appreciate some technical aspects of the nuclear industry. I submit to you that none of us can become a total expert in any one of the areas unless we are working in a very narrow specialization.

**Mrs Johns:** That is from a true educator. Let me ask you this question: You have been at the board since 1990, and most of the time you have been in the technical areas with respect to the board. From 1990 on, have problems been brought to your attention relating to the nuclear facilities of Ontario Hydro?

**Dr Mathur:** The answer is yes. Let me just expand on that a little bit, but before I do that, I really appreciate your confidence in people who have been appointed by various parties. I have a unique privilege: I was appointed by all three parties.

**Mrs Johns:** I suppose that's true, because you have been renewed. Thank you for that.

**Dr Mathur:** I was appointed by the Liberals and then reappointed by the NDP and reappointed by the Conservatives.

Coming back to your question with regard to the nuclear operation, in my very first year I was deeply involved as a board member. I was not serving on any specific committee at that time, because committees were already formed when I joined the board. In virtually every board meeting the major issue used to be progress of Darlington's nuclear station. At that time they were experiencing certain technical problems with regard to the cracking of the end shields of the fuel bundles, and also there were these cracks in the rotors of the generators at Darlington nuclear station. So in the initial phases, Darlington, a nuclear issue, was on the table all the time.

After some time, when Darlington's problems were more or less fixed, Bruce surfaced on the scene. There were concerns with respect to deteriorating performance of the Bruce nuclear station. Ontario Hydro had come from a position where its nuclear operation was regarded as one of the very best in the world. Gradually we started seeing some problems, and that led to a little more interest on the part of the board and formation of various committees such as I mentioned to you. Initially, the power systems operations committee used to look after some of those issues. Later, in 1993, forming the nuclear safety review committee was an indicator that the board had starting taking a greater interest in what was happening on the nuclear side.

Major decisions were made at one stage which meant that unit 2 at Bruce nuclear station was mothballed, a major decision, and ever since there has been deterioration in the performance. The board has been trying to understand where the problems are and to get to the root of the problems, because we have been receiving concerns at the board that there are a lot of issues which have not been

dealt with. There was a backlog of corrections that were required which were not done. Then came the peer reviews, and the peer reviews didn't come out very complimentary. So there was an escalation of the concerns that were expressed to the board, to the point where we are today.

1710

**Mrs Johns:** I'd love to delve into those things and I hope some of my colleagues will. From my standpoint, the issue that's been most important to me is, with your substantial level of education and experience in this area, why did you accept the IIPA report on August 12 and accept the recovery plan philosophy that was presented to you? You didn't have very much time to look at it for all apparent purposes. Did you not have very much time to look at it?

**Dr Mathur:** I think they had a fair amount of time so far as I'm concerned, because I've served on various committees. A lot of issues were always on the table, but there was this real question. We wanted somebody to give a very accurate and honest assessment of the status, where it was, and point out the directions where the recovery could start. In that effort, prior to the team that has been talking to you, there was another consultant that was hired, a Mr Gregory Kane. It's possible that their board members and others have talked about it.

**Mrs Johns:** Who was he hired by?

**Dr Mathur:** He was hired by Dr Kupcis, the president. This was in an effort to generate additional feedback. So we've had several feedbacks. We had the TAPNS committee, a committee advising the board on nuclear issues. Then Mr Gregory Kane was hired and he provided his assessment to the nuclear review committee. Then this team was brought in. We have had, all this time, the feedback from AECB and we have made it our business to hold our meetings of the nuclear review committee at various nuclear stations so that the members working in those stations can understand the importance the board assigns to the nuclear operation. So all that information had been coming. As far as I'm concerned, for me, the confirmation came from IIPA, which was a very extensive, very detailed report, and it was time to act.

**Mrs Johns:** Did you feel that you got enough information on that day? Let's assume right now that you felt the IIPA was the final crescendo, if you will, to a whole bunch of information that came along. Why did you accept this nuclear recovery plan? In your mind there must have been a lot of different alternatives where you could have gone. Tell us what your thought process was as you were listening to the nuclear recovery plan being outlined at the board meeting.

**Dr Mathur:** It was not just at the board meeting. I had the material at least one week ahead of time, and there was a briefing with Dr Kupcis and Carl Andognini, together with the chair of the audit and finance committee and myself. The four of us discussed the findings of this plan. The entire report had already been delivered to me and actually I was flipping through the pages of it because

I didn't have enough time to have read through it, but in that discussion I updated my information base quite a lot.

Then I had an opportunity, like most of the board members, to read through this report, which was a massive amount of reading, I must say. Basically, as I said before, it was confirmation, so far as I was concerned, of the extent of the problem and the clarity of the vision, in my judgement, which came from an independent source. It was no longer a story which was being told by the middle management or the senior management of Ontario Hydro. I saw this as a very independent assessment that was done for people who did not have, in a sense, an emotional attachment to the nuclear operation of Ontario Hydro.

**Mrs Johns:** Having had two or three months since that decision, and more information, for example, the optimization plan and some financial information, do you believe your decision was the right decision on August 12?

**Dr Mathur:** I would say so, yes.

**Mr Conway:** Dr Mathur, thank you for coming. I want to roll back a bit through the early 1990s. What was the nuclear review committee reporting to the full board?

**Dr Mathur:** There was no nuclear review committee in 1990.

**Mr Conway:** Well, whenever it started.

**Dr Mathur:** There was a technical advisory committee and, as I mentioned to you, at that time the reporting was primarily with regard to the problems at Darlington nuclear station.

**Mr Conway:** Would it be fair to say that committee was a precursor of the nuclear review committee that was formed in 1994, was it?

**Dr Mathur:** If I look back, I would not quite say so, because Darlington was a new station which was just coming on board. It was having its teething problems, because with all the stations we have built, we have kept on increasing the size of the units. So no two units from one station to another station are identical. The problem that was experienced by Darlington was very unique. There was resonance in the cooling system which was causing vibrations. It was causing the cracks and the little bumps. Those kinds of things were there.

**Mr Conway:** Let's just focus then on the nuclear review committee. When was it formed?

**Dr Mathur:** The nuclear safety review committee was formed in 1993.

**Mr Conway:** And you were a member of it?

**Dr Mathur:** Yes.

**Mr Conway:** And you remained a member of it throughout?

**Dr Mathur:** I remained a member of it as it kept on transforming.

**Mr Conway:** I'm trying to understand, because in the previous testimony with Ms Johns you made it clear that when Andognini arrived there was a clarity of vision, it was independent, and I can understand that. I'm having a problem with the board members, particularly people like yourself and Mr David Kerr, who was here earlier this afternoon, who was there for a three- or four-year period in the mid-1990s. What was the board hearing from its

subcommittee, the nuclear review committee, and other sources about problems at the nuclear power division? We now know and there has been all kinds of evidence presented to the committee that the AECB and others were very concerned about a gradual decline in operating standards. Let me be very specific. It's clear to me now that the recovery plan that Mr Strong embarked on exacerbated the problem, because clearly too many of the wrong people left. That certainly seems to be pretty clear to me now. Did anybody ever say that to the board?

**Dr Mathur:** I don't think at this date. That may be a different opinion. I guess you are referring to the downsizing in 1993.

**Mr Conway:** That's right. Andognini comes along in 1997 and says, "It's a management problem; it's a culture problem." Then you go below that and say, "What's part of the problem?" Part of the problem is that there were just bad attitudes, poor attitudes, in part because there wasn't a replacement strategy for people who left. That move in 1993 took hundreds, if not thousands, of people out of play, and it appears that a number of good people left who shouldn't have left and weren't replaced. I just want to know, did any of those concerns percolate up to the board?

**Dr Mathur:** The human resources issues were discussed at the board level, and our understanding was that the number of people who took early retirement or voluntary separation packages from the nuclear sites were very few. The total numbers remained more or less unchanged in the nuclear division even after 10,000 people had left Ontario Hydro.

**Mr Conway:** So the board didn't really have a sense, prior to Andognini, that there was a real problem with manpower.

**Dr Mathur:** No. The board had a sense of the problem but not necessarily of the manpower. It was the management issues and the manpower. What was happening was that as we kept on receiving reports from AECB and shortening of the licence, as well as peer reviews, there were repeat findings. Also, we were told that temporary fixes which were labelled as jumpers were used in a lot of operation sites. The board was very concerned that some of the maintenance issues were not being dealt with properly, but the board was not very clear what the root cause of it was. It was not simply insufficiency of the number of people, but probably the communication lines between the management and the people, the workers, were not very clear.

1720

**Mr Conway:** But we now know that the AECB was very concerned about the depth of the cuts, and that starts to show up as early as October 1992. We have correspondence from the president, Mr Lévesque, to the president of Ontario Hydro and others, saying, "We are very concerned that these cuts are going to impair the operational standards and qualities of Ontario Hydro Nuclear." The board really never understood that?

**Dr Mathur:** No, the board was informed that in the judgement of the AECB we did not have sufficient number



of people. But the difference that you and I have in terms of understanding the information is that it was not primarily as a result of massive reduction in the total human resources of Ontario Hydro that nuclear suffered. Certainly there were some people who left but there were other people who joined.

**Mr Conway:** But to outsiders — I remember being here and the number 10,000 was floated and many of us thought the bulk of those people were in construction and in design. We were past Darlington, so it made sense that those people would go. The overall number could be justified. There was certainly in the general community — I put myself in that category; I had no idea that the situation was a bad as people like the AECB were beginning to feel it was, as early as 1993 and 1994.

**Dr Mathur:** I don't think that was the issue. Certainly a large number of people left, and you're quite right, the largest number of people who left were the contract employees and employees from the design and construction side. There were some people who left from the nuclear side, nuclear operators, but the percentage was very small.

**Mr Conway:** But we're now left, Dr Mathur, with a really interesting proposition. We had Andognini in here a couple of weeks ago saying, in part, "We're going to pursue this recovery plan because we have just enough human resources to effectively manage 12 of these 19 reactors, though we understand," and he was at pains, as was Dr Bishop, to say, "that we can continue to operate all of these." How did that happen? How did we get to a stage, over a five-, six-, seven-, eight- or nine-year period where we had so drawn down the human resources component at Ontario Hydro Nuclear that by 1997 we can't operate any more than two thirds of the installed capacity because we don't have the people?

**Dr Mathur:** Let me give you my understanding of the problem. When the units were new, the stations were new, the maintenance problems were a lot less, the maintenance requirements were a lot less. The units were operating extremely well, with very high capacity factors. Gradually, the maintenance started getting neglected and the backlog of the work kept on building up. So Mr Andognini is completely right in saying, "If I have to fix this problem today, I require a staff increase in the resources to clear up all the backlog," which is not to say that the same manpower would have been required 10 years ago or 15 years ago to maintain the stations in good health.

**Mr Conway:** I want to look back to August 12, because I'll tell you the board was nothing if not seized of the matter. Talk about urgent and pressing necessity. The board really acted with remarkable dispatch. Given what the board hadn't been doing over the period 1995-96, or earlier, all of a sudden, "We have to have a decision and it has to be a major multibillion-dollar decision and it's got to be taken at this board meeting." That really strikes me as quite remarkable. Why the urgency? What was the urgency at that board meeting on August 12, 1997? There doesn't appear to have been an urgency previously through much of the late 1980s and the 1990s.

**Dr Mathur:** You just asked, why did the board not act before? The reason I say that is that the situation was deteriorating gradually, and the board reached a stage where it felt confident that the assessment of the problem was quite clear and the recovery plan must start now. The recovery plan was primarily to turn around the nuclear operations. What should we do in order to increase the capacity factors of whatever stations we can manage at this time, and what should be the phasing of bringing in other nuclear stations to build up the total capacity to wherever it should be? The fallout from this is, what is the cost? It's not the cost that was driving the decision, in my judgement; it was the decision to turn around the nuclear operation. We could not afford to go on and on, because stations like Pickering have had six-month licences, repeated by another nine-month licence. The situation was getting pretty bad.

**Ms Marilyn Churley (Riverdale):** Thank you very much for appearing before the committee today, Dr Mathur. Perhaps I can just follow up and continue with this line of questioning. This is one of the areas that is of real concern to the committee and there is some perplexity about how it came about. I just wanted to go back to something you said in answer to a question to Ms Johns earlier. I believe you said that you thought you did have a fair amount of time to look at the recovery plan. First let me be clear you did say that.

**Dr Mathur:** Yes, I did say that.

**Ms Churley:** I guess then, coming back to that, it's the committee's understanding that the board only had access to that recovery plan four days in advance of the board meeting where the recovery plan was adopted by the board. Is that correct?

**Dr Mathur:** No, I had the report for at least a week, if not more.

**Ms Churley:** So you and other board members had it available for a week?

**Dr Mathur:** I'm not 100% sure about the other board members, but I certainly had the report at least a week before, and the reason I say that with confidence is because of this preliminary discussion between the four of us: the chair of the nuclear review committee, the chair of the audit and finance committee, the president and CEO, and Kerr. I had that report in front of me at that time. I did not attend the meeting physically in Toronto because this meeting was arranged at short notice; I attended it by telephone call. So I had this. But just to go back on it, there were interim reports that had been coming out ever since Kerr came on the job. He was providing periodic reports to the board telling us where his assessment process was at the time. In my judgement, the board was building up this information base as we went along, and then came the August 12 meeting. That was the decision time, and that's where the decision was made.

**Ms Churley:** At that time you were at the board meeting via telecommunication. You were on the telephone, in other words.

**Dr Mathur:** No, on August 12 I was there.

**Ms Churley:** Oh, you were there in person, so at that board meeting, when it was decided to accept this recovery plan, was there any discussion whatsoever about alternatives or was there just a general sense that this looked like a good plan and to accept it very quickly? I add to that that we know that Minister Sterling had written a letter to the board asking that the board take its time and consider the remedial action carefully. I'm just wondering if you remember any response to that letter. Was there any discussion at the board about, "Hey, this is big money we're talking about here and a very serious commitment"? Was there any discussion around other alternatives?

**Dr Mathur:** I recall the minister's letter being copied and duplicated and distributed to board members. I recall very clearly that the letter asked for board members to look at all options. Different people may have interpreted options differently. So far as I'm concerned, when we have to make a decision or whatever decision is made, there are two kinds of options that are looked at. Number one, within the nuclear operation, what are the options of turning around the nuclear performance operation? Number two, what are the options to supply the missing amount of power which we may lose if we have to close some of the stations down? It includes discussions of all options from various sources, that is, how will the shortfall be met and what options are available systematically in arriving at a particular decision?

1730

**Ms Churley:** You said earlier that you weren't surprised by this report, that this had been building up for some time and that you — I don't know if you said the whole board — but certainly you were aware of problems.

**Dr Mathur:** Yes.

**Ms Churley:** How long had you been aware that there were problems in the nuclear division?

**Dr Mathur:** As I mentioned, virtually since 1993 the situation had been building up: incapacity of the nuclear staff to take care of the backlog of complaints, repeat findings in peer reviews which — and I wrote letters to the station staff, that we have looked at the problem and it is not acceptable.

We were told that some nuclear staff may think Ontario Hydro is primarily interested in the production side of the nuclear operation, so we had a motion pass, and actually I wrote that motion for the board, in which we said very clearly that the primary focus of the nuclear operation has to be safety, that safety must not be compromised under any circumstances, and of course that we want our nuclear units to operate as efficiently as possible, which was later inserted in the Ontario Hydro newsletter, that particular part of the motion.

What I am suggesting to you is that the scenario was building up: incapacity to be able to handle all the maintenance issues, the number of jumpers increasing, the number of repeat findings increasing and backlogs increasing. We kept on getting assurances from the management from various nuclear stations, "We are going to take care of it," but a lot of those plans did not work. We didn't see a significant change.

**Ms Churley:** Did any of the managers in the nuclear division come to the board, write to the board, express concern about loss of staff, suggesting that they needed to replace some of the staff who were let go? Was that ever raised?

**Dr Mathur:** I don't recall any grave concern expressed. Of course each division would like to have as much manpower as possible.

**Ms Churley:** So that was never conveyed to the board as far as you recall, from the managers, as being a problem.

**The Chair:** We are about to start the final round. In terms of the questioning, it will be about six minutes or thereabouts for each caucus. Just a little clarification, if I may, please, Dr Mathur, some information: The report you refer to you that you indicate you received prior to the board meeting on August 12, was that the IIPA or the recovery plan?

**Dr Mathur:** The IIPA.

**The Chair:** When did you receive the recovery plan?

**Dr Mathur:** The recovery plan report was received later.

**The Chair:** Can you give me an approximate time?

**Dr Mathur:** I don't remember exactly.

**The Chair:** Before the board meeting or some weeks later?

**Dr Mathur:** I don't remember. I think it was after the board meeting.

**The Chair:** It was after the board meeting?

**Dr Mathur:** Yes, as far as I remember.

**The Chair:** I just want to make sure I'm very clear. The recovery plan information you received was after the board meeting on August 12?

**Dr Mathur:** Let's clarify. I have to look at that report you're talking about, this recovery plan report. Which one is it? Can you give me some more information on it?

**The Chair:** The NAOP.

**Mr Conway:** Previous board members have told us that the information came in two packages. The first package was the IIPA, which was the assessment of the problem, and the second package was the nuclear —

**The Chair:** Response to the —

**Mr Conway:** The so-called recovery plan, the specific plan that was going to lay up seven reactors and do a variety of other things.

**The Chair:** We just want to know the date when you, in your mind, approximately received that information.

**Dr Mathur:** I am not very clear.

**The Chair:** Thank you. May I ask you to just clarify for me from your evidence, you indicated you were at one meeting by telephone.

**Dr Mathur:** Yes.

**The Chair:** Which one was that?

**Dr Mathur:** This was a briefing which was arranged between Dr Kupcis, Carl Andognini and myself and Don Fullerton.

**The Chair:** Finally, you indicated that Minister Sterling's letter, you do recall, was circulated to all board members.



**Dr Mathur:** Yes.

**The Chair:** Do you know when that was circulated?

**Dr Mathur:** That was circulated probably at the August 12 board meeting.

**The Chair:** During the August 12 board meeting, I'm a little perplexed that you seem to be the only board member who recalls that with any clarity at all. Nowhere in the minutes do I note the tabling of that letter or the appendage of that letter to the minutes. Can you explain that?

**Dr Mathur:** Could you repeat it, please, for me?

**The Chair:** Yes. I am perplexed by that evidence because you seem to be the only member of the board who has clarity of the circulation of that letter. I am particularly interested that this letter, with the clarity you present now, was not attached to the minutes of that meeting, nor was it noted in the minutes of that meeting. Could you explain why?

**Dr Mathur:** I don't know.

**The Chair:** We'll begin the next round with Mrs Fisher.

**Mrs Fisher:** Thank you, Dr Mathur. I've followed your career a little bit, as a matter of fact, and I appreciate the value you add to the board in terms of technical expertise. I see evidence of that again today in some of the things you've said. I want to ask a couple of questions, and some of it might be reiteration but I'm not clear and I want to be clear.

I heard you say that you received the IIPA report a week before. I also heard you say there were regular updatings by Carl Andognini to the board of directors previous to that.

**Dr Mathur:** Yes.

**Mrs Fisher:** Was there an indication previous to that that in fact this was going to be the finding? Were there any allusions that perhaps these units would be affected, as has been decided upon now?

**Dr Mathur:** There was the possibility expressed that we may have to look at closing some of the units, but not clearly saying the final decision.

**Mrs Fisher:** Given that you're part of the review committee for the nuclear affairs committee, I would ask this: If you received the IIPA report even a week before — I have a copy of the IIPA report and it does not have with it the economic substantiation for the decision that was made at the board, that I can tell. Would you agree with that?

**Dr Mathur:** There may not be a very explicit economic evaluation there.

**Mrs Fisher:** I don't remember seeing any dollar values in there.

**Dr Mathur:** The dollar value may not be there, but the point I'm making is that so far as I'm concerned the decision was, what do you do with the nuclear station at this time?

**Mrs Fisher:** I'm trying to differentiate the difference here between the infrastructure repair requirement versus the economic need and separate that also from the human resource issue, if we can talk about the three of them that way.

The IIPA report, from the best of my reading, tells me there was a human resource problem. I go back to 1993 on the point that I want to make. One of the previous members talked about the decreased staff to the tune of almost 10,000. We know the construction was reaching an end, so we know that absorbed, if I recall, around 5,000. I wish I had those numbers in front of me right now but my memory reminds me that for the Bruce it was 708 nuclear workers affected of a total workforce of 4,300. That's a very significant number, isn't it?

**Dr Mathur:** I do not know the numbers but what I do know is that when the total numbers were looked at before and after, the reduction in the total number of people working in the nuclear division was not significant.

**Mrs Fisher:** Maybe not the reduction so much as the transfer back and forth. We're talking about three sites right now: Darlington, Pickering and Bruce. I understand that as late as just last month they're finishing up the article 11 transferring of all of the mess of that. But what I will say is that if I was told by Ontario Hydro, as I was in 1993, to expect a loss of 708 — I think they almost met that number, if they didn't, by the way — would you not consider — and they are nuclear workers. That's not the head office engineering staff that got moved around, that's not the management staff otherwise that got moved around, we're talking about front-line workers. Would you not consider that to be a significant number? If you knew staffing was around 4,300, would you not consider 708 to be a significant impact?

**Dr Mathur:** If the information is presented to me and says that we have lost 708 people, or something like that, from the nuclear operation and these people are not being replaced with equal skills, it would be a concern to me.

1740

**Mrs Fisher:** Let's go back to one other thing here. I consider you, from watching your past, to be of the technical experience the board needs and you bring that to the board. I think there are people there — and I'm not diminishing your position when I come with this next statement — who have been brought to the board with some business experience who you hope would have the economic overview, maybe even to a higher degree than you would have. If it's counting on you technically, perhaps they'd be counted on financially.

If you can't remember when you got the NAOP report, and yet a decision was made on August 12 which included numbers that I recall — a \$5-billion to \$8.5-billion recovery program — don't you think that time is very tight in terms of your ability to apply those numbers against the recommendations that were being made for recovery of the infrastructure side of it?

**Dr Mathur:** Let me just say a few things: Initially a lot of these issues came to the nuclear review committee as technical problems, which were reported to the board from time to time. As the cost of fixing became more and more important, there were several meetings in which the members of the audit and finance committee participated with the nuclear review committee. In fact, many of the nuclear review committee's tours in the last few months were

attended by a large number of board members because they were interested in in-depth study of certain aspects of the nuclear operation. There were joint meetings of the audit and finance committee and the nuclear review committee.

You are quite right that I may bring to the board table a certain amount of technical expertise. It's up to you to judge the quality of that technical expertise. But I also trust that there are a number of very experienced people on the board who bring to the board their expertise in management and in the finance side of things, so I rely a lot on their analysis and opinions.

**Mr Conway:** I want to come back, Dr Mathur, to the urgency of the decisions taken on August 12, because the board, during your time, didn't appear to have the same urgency about protecting the nuclear assets which were deteriorating in the period from, say, 1990 to 1996. Why was that?

**Dr Mathur:** The board has been concerned about it.

**Mr Conway:** No, I realize that. There was concern apparently but not the kind of dramatic action that was occasioned on August 12.

**Dr Mathur:** Just before August 12, only months before there had been very serious incidents where Pickering had to be shut down, so there were some very drastic things that had started happening as a result of the accumulation of the problems. Clearly it was in the interests of Ontario Hydro, and I believe in it firmly, that we have to address this problem as soon as possible. Any time you made that decision, that would have been — why delay?

For example, let me just say, Carl came in the months of December and January. It took him almost six months and we kept on asking, "When is your report coming out?" because we hinged an awful lot on very detailed findings of this independent body, of the people who were experts in the nuclear area, who were experts and who had looked at stations in the United States and had participated in turnarounds. So we had enormous faith in their findings. They were reconfirming a lot of things and they were adding a lot more detailed information that was not available to the board.

**Mr Conway:** I take it then that one of the things that really you found compelling and that explained the urgency was that Andognini was an outsider, that Carl was more compelling than Al Kupcis or some of the inside crowd.

**Dr Mathur:** No. Al was trying to do exactly the same thing as the board members were trying to do. He was also trying to get a better handle and that's the reason he brought these experts from the United States and the board supported the appointment of these people.

**Mr Conway:** You told us you're an engineer, Dr Mathur, and one of the things that strikes me about the plan — I've got to believe, by the way, that you had the plan, that you authorized it. It's inconceivable — I find it hard to believe the board acted as quickly as it did without a second opinion and without some independent financial analysis. But I've got to believe that you have the — what do they call that thing? The nuclear asset optimization

plan, right? Is that the official — the specific proposal. You had that —

**Dr Mathur:** Yes.

**Mr Conway:** — before you made a decision to approve it. One of the things that jumps out at me in that plan, and you're a man of some technical expertise, is that you're going to lay up seven reactors and in the interim you're going to replace that power in part by contracting for what you must have been told was going to be some controversial coal-fired electricity. How much discussion at the board meeting of August 12 was there about the environmental problems this committee has heard about, that are associated with the replacement power part of the recovery plan?

**Dr Mathur:** There was discussion on it. There were concerns raised with respect to, are we going to cross the limits of emissions? We were sure that we will not cross them, and if it comes to that point then we will have to rely on purchasing power from neighbouring areas.

**Mr Conway:** But there was no doubt in your mind surely that you were going to be purchasing some out-of-Ontario power, that you weren't going to be able, in the short term, to lay up seven reactors and fill that demand, fill that gap in the short term with made-in-Ontario electricity?

**Dr Mathur:** The gap was very, very narrow. In fact, you have to understand that in addition to the capacity requirements, there is always an operating margin, and within that margin we are able to supply most of the energy needs from within Ontario sources. At times, when you fall below that margin there is a need to import. But clearly there was a plan to fire up some of the thermal units. Without those units, we could not operate.

**Mr Conway:** Again on a technical matter, I look at what went wrong and one of the questions I have in my own mind is, did the utility get itself in trouble, particularly in the 1993-94-95 period, faced as it was with a rate freeze and other issues? They ran those facilities at full bore and they cranked out a lot of power. My guess is by deferring some of the maintenance and driven by a bottom line, they stressed the technology to a point which led to some difficulties.

That may be a wrong assessment, but let's talk now about fossil plants. My understanding is that Ontario Hydro's fossil capacity was never intended to be base load.

**Dr Mathur:** You're right.

**Mr Conway:** Under your plan I've got to conclude that you are going to be running these fossil plants absolutely full bore and, in part, to meet base load requirements in the short term. Has anybody done an assessment about the technical impact of that kind of program on the technical integrity of the fossil plants?

**Dr Mathur:** Technically these plants can be run for base load, but the cost of producing power is very high. That's why you use the fossil plants generally for the peaking part. They have the capacity to start and shut them down at very short notice.



**Mr Conway:** So you don't have a worry that in the short term, this recovery plan is going to put very substantial burden on the fossil plants, part of which burden is going to be for base load purposes, and you're not concerned that there could be some very real stress on those plants that could give rise to some difficulty and perhaps some loss of production on the fossil side?

**Dr Mathur:** These plants are designed to operate as a base load and there are —

**The Chair:** Thank you, Mr Conway.

**Mr Conway:** Bill Morison made those kinds of comments about these nuclear plants in this room 20 years ago.

**The Chair:** Ms Churley.

**Ms Churley:** At the board meeting, when you looked at or discussed the possible environmental impact from firing up fossil fuel plants, was any kind of analysis done then for the board meeting or since the board meeting which would show you in some detail what kind of levels we're talking about here?

**Dr Mathur:** I don't remember the levels, but John Fox who is in charge of the generation of thermal and hydro had given us an assurance that, as these plants are used in this period of time, we should be able to manage within the limits.

**Ms Churley:** So he gave you an assurance, but you were not supplied with any kind of analysis or graph or bars or anything that would show peak increases or —

**Dr Mathur:** I don't remember if he provided a table or data and other things. Generally we asked some questions from the management and we have to rely that they have done their homework and provided us with the answers.  
1750

**Ms Churley:** I'll tell you why I worry about that and would like more information. As you well know, fairly recently we found out basically through the media that there were, for 20 years or more, copper and zinc, I think it was, from the tubing being deliberately put into the lake and there are some real questions about a possible coverup around that. We've seen memos that were flying around internally for some time. There is some evidence that — perhaps coverup is too strong a word; I don't know. From some of the information I've seen, I'm inclined sometimes to think that. Whatever you call it, it had been going on for a long time and some people knew about it and no action was taken. I have some real concerns when I'm being assured that technicians who know about this have assured you, the board, that there won't be a problem, but there is no backup information to really assure us of that.

**Dr Mathur:** Just to assure you, you talk about discharge of copper, lead and zinc into the lake. We all get very concerned because you suddenly see a report which talks about the total volume or the weight that has been discharged. I submit to you that when you use the water tap in your house, which is flowing through copper pipes, and it has got soldering which has used zinc and lead, you are discharging, in proportionate amount, the same amount into the sewer as Ontario Hydro is discharging through the normal wear and tear of its condenser plants.

**Ms Churley:** Are you suggesting that was okay, then, for Hydro to do that for over 20 years and not try to do something about it, when there were certainly concerns expressed internally about it? You're suggesting it isn't a problem.

**Dr Mathur:** What I'm saying is that this is the normal process. Hydro realized that in terms of the volume the discharge is very significant in total volume. Therefore, it made a decision at one stage that when some of these condensers were replaced they were replaced by stainless steel, which cut down the amount of the copper and other things going into the lake. Hydro did react to it in a number of condenser units.

**Ms Churley:** I would like an answer to this. You personally, in your background and viewpoint don't think it is a significant problem.

**Dr Mathur:** It is not an insurmountable problem. This is what happens in everything that uses the normal wear and tear of the pipe through which water is flowing at a certain pressure and velocity.

**Ms Churley:** You don't think it's necessary to actually change to —

**Dr Mathur:** It is important. It all depends how much concern we wish to express and how much investment we want to make in terms of not discharging anything. It's a judgement issue: what is tolerable within the environmental constraints in terms of damage to the environment and what the costs are.

**Ms Churley:** Do you think there should be more limits put on to the total loading of some of these pollutants? As you know, some of them accumulate, and accumulate in the body.

**Dr Mathur:** You're right. This is what is happening. Year after year, some of the limits which are allowable limits on various kinds of emissions keep on coming down. What it means is the cost of operating an outfit keeps on going up, and this is the value you have to place on environmental protection.

**Ms Churley:** I come back to environmental considerations, and we're not going to spend much more time on that, but I think overall, that when we hear about nuclear cults and Hydro, there have been concerns in the past, and still, about the commitment to the environment. That leads me back to the issue of the total load and perhaps exceeding limits when the fossil fuel plants are fired up, particularly now. Since that recovery plan was announced we're hearing more about acid rain and that in fact we haven't solved the problem. Despite Hydro and Inco and others drastically reducing the total loads, it has become a factor. How do you think that is going to factor into the recovery plan?

**Dr Mathur:** Would you say then that Ontario Hydro's decisions way back in going with nuclear technology and not going into hydro and thermal — there is only a limited amount of hydro generation in the province. If the balance of the power came from thermal, we would have created far greater damage than what is being done now, for sure.

**Ms Churley:** I suppose that would get us into future considerations and where we're going in the future and I believe we're trying to find out what happened, aren't we?

**The Chair:** I thank you for your question, Ms Churley. That was fine. A good place to bring it to an end at that point.

**Ms Churley:** I think we do need to look at alternatives and green forms of energy.

**The Chair:** Thank you, Ms Churley. That was an interesting segue and I appreciate that.

Thank you, Dr Mathur. We appreciate your being here. Just a couple of small questions to finalize the information for the committee.

I was reminded by staff that there are some members of Ontario Hydro staff in the room who may be able to assist you with your recollection of the meeting of August 12. I asked you some very specific questions about dates and times of circulation, and if you wish to consult with them, I would be very pleased if you would like to do that very quickly. I asked you, for example, when the NAOP report was circulated to you and when it was received.

**Dr Mathur:** That was on August 12.

**The Chair:** Do you recall when during the meeting it was circulated to you?

**Dr Mathur:** This was right at the beginning.

**The Chair:** And there was discussion about it during that meeting?

**Dr Mathur:** Yes.

**The Chair:** Do you recall the circulation of Minister Sterling's letter?

**Dr Mathur:** Yes, I do.

**The Chair:** Was that circulated at the beginning of the meeting or at the end of the meeting or some time during?

**Dr Mathur:** It was towards the end.

**The Chair:** Was it discussed?

**Dr Mathur:** I don't recall a great discussion, but we did read the letter. The letter was read to the members.

**The Chair:** Was it debated? Was it introduced and was there some follow-up debate about it? What weight did that minister's letter carry for the discussions?

**Dr Mathur:** The letter indicated to board members that it is the minister's wish that we examine various options. I guess in the judgement of a lot of board members, certainly in my case, we were doing precisely that.

**The Chair:** To make sure I'm very clear: That letter was circulated after the board had taken its decision on the plan.

**Dr Mathur:** Was it after the decision? I'm not sure. Okay. This was during an in camera session.

**Mr Conway:** Which is to say what?

**The Chair:** I have no idea what you're saying. What does that mean?

**Dr Mathur:** This was towards the end of the meeting. It was in the in camera session.

**The Chair:** So you had taken your decision on the plan at that point and then you went in camera. Is that right?

**Dr Mathur:** I don't — yes, that is right.

**The Chair:** At that point, after the decision had been taken, you then received the minister's letter and you gave it some in camera discussion?

**Dr Mathur:** Yes.

**The Chair:** Dr Mathur, I want to thank you very much for coming down from the home of Huron College and that other place across the road. I thank you for your generosity of testimony. I hope that if there are further questions the committee has of you, you will be prepared to attend upon the committee.

**Dr Mathur:** Certainly.

**The Chair:** Thank you so very much. You are excused.

**Mrs Johns:** Mr Chair, I could well have followed improper procedures because I don't actually know what the procedures for the select committee are. About a week and a half ago, after a number of testimonies, I wrote to Ontario Hydro and cc'd you on those requirements I had from Ontario Hydro, asking for the response to be back by the end of the week. If I didn't do it the way maybe I should have, then I apologize for that, but I have not received any information back from Ontario Hydro yet. I was wondering if we have some ability to be able to get that information back from them.

**The Chair:** Let me check to make sure we're very clear it has not come in through other circles. Let me ask the clerk: Have we received a response to Ms Johns's inquiry.

**Clerk of the Committee (Ms Donna Bryce):** I do recall a response being circulated from Ontario Hydro. It did refer to your name in it. I'm not sure when, but I do recall it.

**The Chair:** Mrs Johns, it is important. The clerk indicates there has been some response. We will doublecheck it tonight, if you would do the same. Tomorrow, if you have not found a response that is either adequate or indeed deals with your inquiry, if you will raise that for me, you have my undertaking that we will pursue that vigorously.

**Mrs Johns:** I appreciate it. I certainly hope I didn't miss it because I try very hard to read all of this documentation that's flooding through.

**The Chair:** It is my pleasure to be the servant of the committee.

**Mr Conway:** If anybody is here from Hydro, make a note of that. Johns is the name, don't fool around.

**The Chair:** May I also remind the committee that we are meeting tomorrow morning, for the benefit of Mr Conway I'll say at 8:30 am, that's 0830 for those who speak metric. We will be meeting in closed session from 8:30 until 9, and then we go into open session at 9 am. We will be meeting in room 151, which is the Amethyst Room. I would recommend you wear blue shirts, Dr Galt.

**Mrs Fisher:** Will all proceedings take place in 151 tomorrow?

**The Chair:** It is my understanding we will be there for the entire day. That means you had better take all your documents with you this evening when you go.

**Mrs Johns:** I'm sorry about bothering you and keeping you so long. The optimization sheets that we have from



Ontario Hydro with respect to all of the plans, is that public information?

**The Chair:** My understanding is anything that's sent to this committee is public information.

**Mrs Johns:** Someone has asked me if they could have a copy of it. Am I at liberty to pass that out?

**The Chair:** My understanding is it has been filed. I know of no document that has crossed my desk that has said "top secret" or whatever.

**Mr Conway:** That is so sweet and so innocent. The nuns taught you so well.

**The Chair:** Please understand, in that response, Mrs Johns, when the staff circulate items to the committee members, it may be confidential and it is marked so, and I do ask you to respect that very carefully, but that's from our staff.

Any other business? If not, then this committee will stand adjourned until 0830 in room 151 tomorrow morning.

*The committee adjourned at 1802.*





## CONTENTS

Tuesday 21 October 1997

Power Workers' Union .....	H-145
Mr John Murphy .....	
Mr Robert Franklin .....	H-154
Society of Ontario Hydro Professional and Administrative Employees .....	H-161
Mr John Wilson .....	
Ms Leslie Forge .....	
Mr James Bullock; Mr David Kerr .....	H-170
Provincial Council of Women of Ontario .....	H-187
Ms Gracia Janes .....	
Consumers' Association of Canada .....	H-191
Mr Peter Dyne .....	
Mr Robert Warren .....	
Dr Mohan Mathur .....	H-195

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H-9

H-9

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Ontario Hydro nuclear affairs**

**Comité spécial des affaires  
nucléaires d'Ontario Hydro**



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## LEGISLATIVE ASSEMBLY OF ONTARIO

## ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

# SELECT COMMITTEE ON ONTARIO HYDRO NUCLEAR AFFAIRS

# COMITÉ SPÉCIAL DES AFFAIRES NUCLÉAIRES D'ONTARIO HYDRO

Wednesday 22 October 1997

Mercredi 22 octobre 1997

*The committee met at 0913 in room 151, following a closed session.*

## ONTARIO ENERGY BOARD

**The Chair (Mr Derwyn Shea):** I'm very pleased to welcome a number of very distinguished witnesses to the committee today. We begin with witnesses from the Ontario Energy Board. I am pleased to welcome, on behalf of the committee, Marie Rounding, chair, Roger Higgin and George Dominy. I'm particularly pleased that they have graciously accepted the invitation of the committee. We have up to two hours with the witnesses from the Ontario Energy Board. For purposes of Hansard, if you would be good enough to introduce yourselves, we are in your hands for your opening statements and then questioning. Welcome.

**Ms Marie Rounding:** Thank you very much. Good morning, Mr Chairman and members of the select committee. My name is Marie Rounding, and as chair of the Ontario Energy Board I'm very pleased to be invited today to assist the committee in whatever way we can. Also in attendance with me are two members of the Board: my vice-chair, Mr George Dominy, and a member of the board, Dr Roger Higgin. All three of us have sat on various hearing panels to review Ontario Hydro matters.

With the indulgence of the committee I would like to take a few moments to highlight how the Ontario Energy Board has dealt with Ontario Hydro matters that have come before us. To do this I will focus on three key areas: (1) the mandate and responsibility of the board with regard to Ontario Hydro rates and the differences between those responsibilities and our responsibilities regarding the rates of the province's natural gas utilities; (2) the board's reviews of Ontario Hydro's nuclear generation; and (3) constraints on the board's review of Hydro rates.

First of all, who we are: The Ontario Energy Board or, as I may start to call it, the OEB is an independent, quasi-judicial tribunal which reports to the Minister of Energy, now the Minister of Energy, Science and Technology. Most of the board's responsibilities are established in the Ontario Energy Board Act. In addition, five other statutes give jurisdiction to the board: the Municipal Franchises Act, the Petroleum Resources Act, the Public Utilities Act, the Assessment Act and the Toronto District Heating Corporation Act. I will, though, focus my comments today on the Ontario Energy Board Act.

The Ontario Energy Board usually has seven full-time members, although we're short one right now, including the chair and vice-chair and four part-time members. The board members are a multidisciplinary group composed of economists, lawyers, engineers, chartered accountants and business people familiar with the energy industry.

The OEB is known as an economic regulator. Our primary focus, whether we are dealing with natural gas or electricity issues, is on ensuring that the rates for energy and related services supplied by a monopoly energy utility to its customers are just and reasonable. We do this through an examination of evidence adduced through the public hearing process. In other words, our job is to protect the public interest where a monopoly exists.

In the case of natural gas, our role includes overseeing the development of the natural gas storage, transmission and distribution system in the province and the capital investment plans of the gas utilities, which have a major impact on rates.

The primary difference between gas and electricity is that the large natural gas distribution utilities, that is, Consumers' Gas, Union Gas and Centra Gas, are subject to regulation under the Ontario Energy Board Act, whereas Ontario Hydro is not.

I'd next like to give you an overview of the board's role in setting natural gas delivery rates.

The investor-owned gas utilities are required under the Ontario Energy Board Act to submit any proposed change in rates to the OEB for review and approval. Following a public hearing, the board establishes just and reasonable rates that the utilities may charge for transporting, storing and distributing gas. The board sets gas delivery rates as low as possible while providing utility investors an opportunity to earn a fair return. The board periodically approves a pass-through of the gas price the utility pays in the competitive market and establishes the buy/sell reference price to be paid to a direct purchaser or his/her agent, broker or marketer, what we call ABMs. However, the board has no control over the prices charged by, or marketing practices of, ABMs operating in the competitive gas market.

The board also approves applications for franchises, storage, transmission facilities and distribution system expansion plans.

The OEB's primary objective when setting gas utility rates is to ensure that the overall public interest, which includes customers, employees and shareholders of the



utility, is served and protected. The board's energy returns officer monitors the financial performance of the gas utilities and their compliance with the board's orders on an ongoing basis, and if a utility's financial picture changes significantly, the board may hold an interim rate hearing to grant relief to either the company or its customers. This role does not apply to Ontario Hydro.

Next I will turn to the main topic of today's presentation: the OEB role in reviewing Ontario Hydro rates. Ontario Hydro is not subject to the provisions of the Ontario Energy Board Act except when it proposes to change bulk or wholesale power rates to customers having an average annual power demand of 5,000 kilowatts or more, including large industrial customers, a municipal corporation or a municipal electric utility.

Ontario Hydro is required under section 37 of the Ontario Energy Board Act to submit any proposed change in its bulk power rates to the Minister of Energy, Science and Technology, who then is required to refer the proposal to the board for review. This is not discretionary. The board is not mandated to review Ontario Hydro's capital plans, though, or the development of the electricity system.

The minister, by letter of reference, requests the board to consider the proposal and to make recommendations to Hydro and the minister, to ensure that rates are set as low as reasonable to minimize the impact on electricity customers, while giving regard to whether or not the proposal will maintain Hydro's financial soundness and integrity, maintain reliability and quality of service. The board's role is an advisory one and its recommendations to Ontario Hydro and the minister are not binding. Ontario Hydro's board of directors is responsible for the final approval of the utility's wholesale rates.

#### 0920

The extent of review into matters affecting proposed changes to Hydro's wholesale rates can also be scoped by the minister's reference letter which establishes the matters the OEB is, or is not, specifically required to review. Some reference letters include additional items to be reviewed. In HR 22 the OEB was requested to review Hydro's restructuring and experience in experimental rate options, while HR 21 requested a review of executive compensation.

The OEB typically reviews Hydro's proposed revenue requirement, including its forecast of sales, operating expenses and depreciation expenses. Hydro's proposed financing plans and the issue of financial soundness is considered in determining the net income for the test year. The board has always considered Hydro's financial soundness and specifically its net income policy as integral to the Hydro rate reviews. One significant difference between the rate reviews of Ontario Hydro and the major natural gas utilities is the return-on-equity component. The board is required to approve a fair rate of return on gas utilities' investors' equity which amounts to approximately one third of a gas utility's total capital. However, there is no similar requirement for Ontario Hydro.

The OEB examines how Hydro's costs are allocated to its three main groups of customers — direct industrial, municipal and rural retail — to ensure just and reasonable rates. The last two ministers' referral letters have narrowed the board's review, in that they have requested the board to focus its review only on rates and cost allocation or on rate design, that is, there would be no revenue requirement review.

The last review of an Ontario Hydro rate change proposal by the board was held in June 1996, and that was HR 24 for 1997 rates. The proposal consisted of a number of new rate options and a change in the form of rates for municipal electric utilities. The reference from the minister directed the board to review these matters and their effect on Hydro's financial soundness. Under the overall rate freeze, there was no change in average rates or revenue proposed by Ontario Hydro. The board recommended continuation of certain rate options, but did not recommend the implementation of other proposed options because of significant concerns regarding fairness and the appropriateness of the terms of the options. The board also stated its concern with Hydro's reluctance to address outstanding board recommendations regarding rate design. Ontario Hydro rejected the board's recommendations and implemented its proposed rate options.

My next topic is the board's review of Hydro's nuclear production or what the OEB has had to say about Hydro's nuclear program over the years. A summary of the board's recommendations from HR 15 in 1987 to the present has been provided to the committee in the background notes.

The OEB has always looked at Ontario Hydro's overall energy production forecast and generating plant performance, since this is the single largest variable cost driving rates. The performance of nuclear generating stations, because of their significant contribution to Hydro's overall energy production plans, has been of particular importance, not because they are nuclear, but due to the fact that they have been the single largest generation cost factor for the utility in any given year.

It is clear from the hearing record of the last 10 years that the board became increasingly concerned about the poor economic performance of Hydro's nuclear generation facilities and the serious impact on rates that this was having. However, it was also clear that Hydro did make efforts over the years to improve nuclear performance. In HR 22, that is, the 1995 rates case, Hydro presented an improved nuclear performance outlook which was supported by recent trend data, as well as a new nuclear business mission statement which emphasized safety and reliability.

The board has, over the years, made recommendations with respect to nuclear decommissioning costs, including the disposal of Ontario Hydro's nuclear waste. Going back to HR 16, dealing with rates for 1988, the board recommended that the minister refer the matter of decommissioning costs for a separate and independent hearing. The board also recommended that Hydro complete a study of irradiated fuel storage costs. In the next two reviews, HR 17 and HR 18, the board recommended that the minister request it to hold a hearing

specifically on decommissioning cost estimates. In HR 19, the board reviewed the change in Hydro's policy regarding fuel storage. In HR 21, dealing with rates for 1993, the board recommended that Hydro review its provision for low- and intermediate-level radioactive waste disposal. Most recently, in its HR 22 report dealing with Hydro's proposal for 1995 rates, the board supported the principle that Ontario Hydro establish a financed nuclear decommissioning fund.

Lastly, I would like to address the constraints and benefits of the Ontario Hydro rate review from the board's perspective.

The first constraint is the mismatch between the statutory requirements and Hydro's planning and budgeting process. Over the past few years, in particular in HR 18 through HR 22, the board has expressed concerns about the timing of the rate review as it relates to the planning and budgeting process used by Hydro. The board's concerns were that the effectiveness of the board's rate review was being compromised by the use of stale data and forecasts.

In HR 18, the board expressed a concern that Hydro's internal planning process was continuing on and updating information, while the hearing worked with the previous year's estimates. In HR 19, Hydro's plans and budgets for 1991 were updated to such a degree that it prompted the board to question whether filing of such a preliminary proposal met the spirit of the Power Corporation Act. In HR 22, the board urged Ontario Hydro to revise its planning process in order to present actual business plans for the test year as opposed to a forecast of the test year plan contained in the current year's actual business plan.

Second, there are major time constraints and pressures resulting from the statutory deadlines.

Ontario Hydro is required to submit to the Minister of Energy any proposal to change rates no later than eight months prior, and that turns out to be April 30th, to the date the proposed change is to take effect, which is January 1, when they implement their new rates.

A letter from the Minister of Energy refers Hydro's proposal and, upon receiving a referral, the board must hold a public hearing and make a report, or an interim report, to the minister no less than four months prior, and that is August 31, to the date the proposed change is to take effect. This means that the entire hearing process from the filing of evidence to the board's report must take place within a four-month time frame.

Ontario Hydro typically provides limited evidence in its April filing because its business planning and budgeting process, as I mentioned, is going on in parallel and is not synchronized with the statutory requirements. Consequently, much of the evidence is created by the process of filing interrogatories with the utility and waiting for their responses. Hydro also has a general tendency to provide piecemeal updates to its evidence during the hearing, and this can become a frustrating exercise for all parties.

Participants in the hearing have, from time to time, expressed the view that the process is of limited value given the effort of the parties involved and the fact that the

board's report with its recommendations can be simply ignored by Hydro without consequence. However, the board believes that the influence of the board's report may be greater than a strict count of which recommendations were implemented in full might indicate.

There are some positive aspects to the Hydro rate review process, if we accept the theory of "second best":

It gives stakeholders a forum to question Hydro's management about forward plans and rate changes.

It provides the only regular, independent, public review of Hydro operations.

Analysis has demonstrated that the OEB's rate recommendations have at times been heeded by the Ontario Hydro board and had a moderating impact on rate increases, at least during the 1980s.

The OEB believes that the overall benefit to cost of the Hydro reviews has been a positive one.

That concludes my opening remarks. We are available to answer any of your questions.

Before we do so, I should point out that if you are looking for a historical perspective or would like to raise questions with regard to any specific rate review, we have a wealth and depth of experience in both of the board members with me today. Mr George Dominy was involved in HR 22, which was the last major rate review we had. That was a full rate review, looking at the revenue requirement, and also involved the Ontario Hydro restructuring. Dr Roger Higgin was involved in HR 18 and he was also the presiding member of HR 19, which took a look at the net income policy of Ontario Hydro. Mr Dominy and I were also involved in EBRLG 36, which was the reference to look at Ontario Hydro International Inc matters.

I should just point out that all three of us have been at some time or are now civil servants and have actually been at the Ministry of Energy at some point in the 1980s, although not necessarily dealing with Ontario Hydro matters. In fact, Dr Higgin and myself also had a previous term on the board in the 1980s, which is why Dr Higgin is able to speak to HR 18 and HR 19 matters. We're happy to answer any questions you may have.

**0930**

**The Chair:** Thank you for your presentation, Ms Rounding. We will do the circulation by caucus. Maybe I could just ask you, in light of your information about the history, both of the deputants today and the relationship between the energy board and Hydro, to indicate to the committee very briefly before we go to the caucus that working relationship that has existed or not between Ontario Hydro and the energy board.

**Ms Rounding:** The staff of our board do have a working relationship with the staff of Ontario Hydro and they regularly exchange information. One of the things we tried to do on an ongoing basis was to have a meeting after each rate review to discuss how the rate review proceeded, whether there was more information that we could have had, more timely information, and some of the concerns I've expressed in my opening remarks are reviewed with the Ontario Hydro staff at that time.



**The Chair:** Is it your opinion that historically Ontario Hydro has been conscious of and attendant to the opinions and views of the energy board?

**Ms Rounding:** I think that over the long term the recommendations of the board have had an impact on Ontario Hydro and I think just the whole public review process has had an impact. Sometimes in the short term they have not followed our recommendations and there have been some concerns.

**The Chair:** We'll begin the questioning with the government caucus.

**Mr John O'Toole (Durham East):** Thank you very much for your presentation and for being with us this morning. The presentation, I think, is somewhat qualified in the closing remarks on page 6, where you say if second-best counts for anything. Overall, my consideration is going to be, what is the point of spending the time and money? I don't mean that facetiously.

I'm going to start with a couple of things, HR 15, for example. It states that "the board was not convinced by Hydro's testimony that it would soon experience declining cost pressures." HR 15 was saying that you weren't convinced, but Hydro was telling you that they had declining cost pressures. That's not exactly the environment we're in today, but do you have any reasons why you were not convinced? Could you elaborate on that particular HR 15 report?

**Ms Rounding:** I'm afraid HR 15 predates any of us here. Would you be able to comment on this, Dr Higgin?

**Mr O'Toole:** I wouldn't labour on it too much. I think it's substantiated by the dilemma we're in today. I guess in a broader sense I've had some lack of confidence, looking at the annual reports, which would show that periodically there are significant write-downs. I think it's \$7 billion over the last four or five years. That's a fairly unstable fiscal climate. Would you comment on that, the ability to audit rates and pick out this little piece of what a kilowatt costs in a background of a lot of complete unknowns?

The next one is HR 22, which you may have some familiarity with. The decommissioning costs, maybe counting in that light, are not even part of the equation, really.

**Ms Rounding:** Perhaps I could refer this to Mr Dominy, as he sat on HR 22.

**Mr George Dominy:** The question of decommissioning costs is an issue which I believe over the years the board has requested an investigation of what it is, and this review has not been taken in detail. With regard to that issue in HR 22, the principal question that was raised related to the fund that was being established for the storage of spent fuel. The board's recommendation in that regard was that it supported the proposal put forward by Hydro that they would create a financed fund as opposed to putting in a provision, which means you collect money from the ratepayers and then it's reinvested in Ontario Hydro, but it's on the books, you've collected the money, and when the time comes to require the money, then Hydro would raise it by other means. The principal issue

in this regard was the question of making that a financed fund as opposed to a notional fund.

**Mr O'Toole:** A notional fund is the way it's currently carried, sort of on the books as part of the overall debt.

**Mr Dominy:** The board certainly endorsed the proposal, which was made by Hydro itself, that they would seek to make that a financed —

**Mr O'Toole:** Just probing a little bit — I sure will be jumping around here — is the actual model they used to forecast the decommissioning costs in any sense accurate?

**Mr Dominy:** I'm afraid I'm not able to answer that.

**Mr O'Toole:** Who is? Who would I have to ask that question to? It is a serious question.

**Mr Dominy:** I think the board said it felt this is an issue that needed investigation. I think it's an issue you really would want to pursue further with Ontario Hydro itself. The board has not done a review; it has recommended in the past that such a review be made.

**Mr O'Toole:** In a broader sense, I'd like your comment. We've heard that none of your decisions are binding, and I don't mean that facetiously. I'm returning to that particular line. It must be very frustrating because you have, as you said, really a very short four-month window to review the rate, and in the background we have a plethora of technical, unsubstantiated, somewhat abbreviated data, always being augmented and always out of date. Without being flippant, how useful is the exercise at all?

**Mr Dominy:** One of the issues about the Hydro review process is, it is not the board by itself alone that is participating in it. In HR 22 there were 40 active intervenors. When you add the collection of the input of all these different groups, you get a more detailed look at Hydro's plans or activities than you would get if you relied purely on a single entity to do it. This is an advantage.

Many questions and issues are raised by the interest groups, people like the stakeholders, people like the Municipal Electrical Association, people like the Association of Major Power Consumers in Ontario, by board staff, by many other intervening parties. People from the Bruce community were intervenors, and various other groups. I think if that assists — it's a very complicated, very wide-ranging area.

**Mr O'Toole:** I'm going to oversimplify it, then. We have a summary of the HR costs, basically \$1 million or more for every one of these HRs, which includes the intervenor costs and the awarded costs. We're aware it's an extremely expensive process. I guess the issue I'm bringing to you is, of what value is it as opposed to signing some kind of record of testimonial, which I think is an important scientific observation. Whether or not the government takes action, it's kind of out of your hands, really.

**Ms Rounding:** I think it is a frustrating process when from year to year you find that your recommendations are not implemented and you're not able to move ahead on a particular issue. But I agree with what Mr Dominy has said, that the public review process in itself does have some moral suasion with regard to Ontario Hydro. They

have made some changes, as I indicated in my closing remarks.

I think I also indicated that we think it does have some value and that although there are some costs to the process, we feel the benefit-to-cost ratio is positive. I think Dr Higgin would like to speak more specifically to that point.

**Dr Roger Higgin:** I think the board's experience in regulating large utilities was applied to Ontario Hydro in this way. We took a thorough look at their revenue projections, and usually the tendency is to be over-optimistic, and also the costs, and the tendency there is usually to underestimate certain costs.

On the other hand, what the board's review I think ended up doing in many cases was making recommendations which would result in a lowering of the overall rate proposal, and a very important point is the updated data, which usually indicated a much higher rate increase than was originally filed. That was the experience we had, by the time all the costs were updated, indicating ways in which they could moderate the impact of the rate increase through cutting costs and so on.

Also I think we had a significant impact on maintaining the financial integrity of the utility by making adequate provisions for covering net income allowances.

0940

**Mr O'Toole:** I'm just going to switch; I have one more minute left. The switch I have here is that we are going to hear a lot of inquiry about alternative energy sources. The most popular, perhaps the most environmentally friendly, would be the natural gas utilities.

That being said, if the whole market sort of dynamically shifts around so the demand side on natural gas goes through the roof, you're going to experience — I'm asking the question: If the utilities make a major switch and yet the costing justifications for any of the applications to provide alternative sources are based on today's prices, what would your expert advice tell me about the future price of natural gas? If there's some pressure on the market to move from nuclear to this very environmentally friendly form, what degree of confidence have I to make a comparison to say that it's a good formula but it's based on 1996 data which say the price is marketable, but under current conditions the demand goes through the roof and the supply falls and, wham, you get a price increase.

Last year I had many complaints in my riding about the tacked-on price of natural gas. If you recall, there was a kind of bundling up boosting the price and they all got a bill of \$250 or more, every constituent, to bump up the price of natural gas. You bulk it up based on the best-known demands and at the end you kind of give them a rate increase.

**Ms Rounding:** Was that the retroactive rate increase from Consumers' Gas?

**Mr O'Toole:** Yes, that's the one.

**Ms Rounding:** That is of course because the cost of gas did go up and the utilities don't make a margin on the commodity cost.

**Mr O'Toole:** That's really my question.

**Ms Rounding:** It is passed through to the consumers.

**Mr O'Toole:** Exactly.

**Ms Rounding:** It's difficult for them to understand that we don't regulate that other than looking for prudence in the purchasing.

**Mr O'Toole:** The commodity cost is what I'm talking about, though. Without trying to interfere with you, that's the margin I'm trying to get to. You look at the longer-term stable costs and then all of a sudden you get the demand costs, the marginal increase. That's not even regulated. It's passed through to the customer. I'm forgiving you for that, but that's the climate we'll be in if we did, en masse, switch to some kind of natural gas option.

**Dr Higgin:** Natural gas fired cogeneration combined cycle plants are the current main mechanism of adding incremental generation capacity. You're correct that the main factor affecting the cost of production of power from those facilities is the cost of gas. There are ways in which, through contractual arrangements, the owners of those plants can minimize the impacts of gas over the short term and, to a degree, over the long term as well. But that is a key question. Natural gas fired cogeneration may look attractive now. Should there be an increase in natural gas prices that is significant, they may not look as attractive, although on the other side, plants that are built now will have depreciated most of their fixed assets and will have lower fixed costs at the same time. So those two may offset one another.

**Mr O'Toole:** What about the pipe corrosion theory? I want to get into the theory. We've got the natural gas, that's the main form. Now we've got the pipe problem. We've got all these pipes that have stress fractures or whatever they are. I guess that's a significant industry problem.

**Ms Rounding:** I think the National Energy Board has a program to deal with the stress corrosion problem.

**Mr Sean G. Conway (Renfrew North):** Thank you, Ms Rounding and colleagues, for a very clear and very helpful presentation. I think this in the end is going to be very useful testimony and I thank you for it.

Let me get right to the primary interest I have. How long have you been on the board, Ms Rounding?

**Ms Rounding:** I've been chair for almost six years now and I was also on the board from 1984 to 1987 as a member.

**Mr Conway:** So you've been there for the better part of 10 years.

**Ms Rounding:** Yes.

**Mr Conway:** Do you see or feel from that almost decade-long experience any administrative or policy reason why the people of Ontario shouldn't move from second-best to presumably better or best regulatory environment, whereby Ontario Hydro and their friends in the electricity sector are subjected to a thorough and binding regulatory framework?

**Ms Rounding:** Obviously, as a regulator, we would prefer first, best, we would prefer to regulate on a level playing field. I feel it's increasingly important, as we move to deregulation and we move to convergence of the



two industries, where energy is going to be interchangeable, that if we are going to regulate the monopoly functions of the natural gas industry, it probably makes sense that we also regulate the electricity industry on an even keel.

**Mr Conway:** Moving forward with that, as you see the future unfolding, what are the areas of the electricity sector that a board such as yours ought to be regulating in a thorough and binding fashion?

**Ms Rounding:** If we go back to the theory of regulation, we should only be regulating that which remains as a monopoly, and where there's effective competition, we should allow the market to operate. What we have to do, and what we're doing in the natural gas industry right now, is to try to decide when there is effective competition so that the board can forbear and not regulate in certain sectors. We can foresee in the future that generation can perhaps become competitive. Until it is competitive, I think there is a role for regulation because it would still be a monopoly for a certain period of time.

Transmission, I think most people accept, will probably remain a monopoly and so regulation of the transmission makes sense. If you go to the distribution function, if we go to full retail competition, then there would probably be regulation of the distribution function if it remains a monopoly, as it is.

**Mr Conway:** The government is in the process of preparing a white paper on electricity reform. Ms Rounding, have you or any of your colleagues and/or staff at the energy board been consulted by the officials in the government who are preparing that white paper?

**Ms Rounding:** We have not seen the white paper. We have been consulted on certain issues and asked, "If this were to happen, what would your situation be?" We've provided some advice, some research on a number of issues for them, but we have not been privy to the white paper itself.

**Mr Conway:** What specifically were the issues on which your advice was requested?

**Ms Rounding:** I think some of the things were resource requirements that we would need if we were to regulate Ontario Hydro —

**Mr Conway:** You can take the question as notice, if you want to return to it later.

**Ms Rounding:** One of our staff members who did some of the research is here with me today. There was history of gas deregulation, so that you could see the parallels that were being drawn in the natural gas industry to the electricity industry. It was more general research rather than specific research for the white paper.

**Mr Conway:** On that point there is a great debate in the community about gas and electricity. In fact many in the business community are quick to point out: "You've deregulated natural gas in this regulatory framework. There should be little or no difficulty doing the same with electricity." Could you compare and contrast the natural gas and electricity sectors, particularly with a view to the policy issues that any Parliament and Legislature, and certainly the government, are going to face?

**Ms Rounding:** Are you asking in terms of deregulation?

**Mr Conway:** In terms of a competitive market, in terms of regulation. The argument is made that there really is no difference between electricity and natural gas. I, for one, believe there is, because certainly I represent a lot of people who fully expect they're going to get electricity and know they'll never get natural gas. As an elected official, I find a clear difference in the mindset of my constituents in terms of their expectation of electricity and their expectation of natural gas. I may be the only person in the land who feels that.

**Ms Rounding:** We have had various arguments over the years as to whether natural gas and electricity are essential services and perhaps the public does tend to see the provision of electricity as more an essential service than natural gas. But if you take a look at the two industries, obviously there are quite a few number of suppliers on the gas supply side, but on the electricity side right now we really just have the one major supplier of electricity. Of course there's another major difference in the sense that gas can be stored and electricity can't. The transactions and trading and interchange take place on a split-second basis, so the central market operation function is a very key function in the electricity industry. It's very important that in any change towards deregulation you get that function correct. I think it's much more crucial than it is in the natural gas industry, although it is very important there as well.

0950

**Mr Conway:** Just reiterate why in electricity — is it because you can't store electricity and you can natural gas? That's the fundamental difference?

**Ms Rounding:** That's right. In fact in Ontario the direct-purchase market for natural gas has developed more quickly than it has in other provinces such as British Columbia. One of the reasons British Columbia gives for the fact that they haven't developed the direct-purchase market there is that they don't have the same access to storage we do here. We have that security of supply and there aren't concerns; there will always be gas there, at a price but the supply will always be there. There is some security here that there isn't in other provinces. That's what we have to make sure of on the electricity side, that there is some security of supply when we move to a competitive market.

**Mr Conway:** What other lessons are to be learned, particularly as we think about the electricity market becoming more competitive? What lessons ought we to take into account when we think about the experience of the gas sector over the last 10 years?

**Ms Rounding:** I could begin, and my colleagues may want to add something. Some of the lessons we have seen are that, first of all, it takes a while. We've been at natural gas deregulation for 12 years now and we're still not all the way there. One of the other things we've learned is that it's very important to involve the industry. We have tried to make the industry come up with solutions because we feel that if you can get buy-in from a number of

stakeholders, you're going to get a more effective solution than if we just impose one solution or another.

That has worked quite well. Unfortunately, though, getting consensus is not always easy, but it's a good starting point. Even if it means the board or the government has to make the final decision on some of these issues, you can scope the issues and narrow the different positions a lot better if you have some industry input. Also it achieves the purpose of educating the various stakeholders.

We had in the natural gas industry a working group that worked for eight months extensively. They didn't reach a great deal of consensus, but I think over the time they increased the level of awareness of everybody involved in the process so that when we eventually go to the hearing, hopefully it'll be more expeditious and we can focus very quickly on the areas of difference.

**Mr Conway:** Taking those points into account and keeping in mind that electricity is in some respects a fundamentally different commodity, and viewed as such by the public, and that we're going to be heading into a world where substantially there is really only one supplier for a lot of people and it probably will remain that way for some limited time at least, from your point of view, what would be the pitfalls that the Legislature and the government should be very careful to try to avoid?

**Ms Rounding:** Just to follow up on the last question that may lead into this question, one of the other things I was going to say with regard to natural gas is that we have to be very careful not to erect barriers to entry for new competitors. In some of the provinces, in natural gas they didn't allow, for instance, aggregation of accounts. They had higher exit and entry fees for new entrants, so it made development of the market more difficult. Obviously here there's a different situation where there aren't as many players in the game. I think that's something the government is going to have to look at. If it's really looking for a true competitive market, it has to make sure there aren't barriers to entry.

**Mr Conway:** Does that mean that —

**The Chair:** Thank you, Mr Conway. We'll come back.

**Mr Floyd Laughren (Nickel Belt):** Ms Rounding, welcome to the committee, to you and your colleagues. My instinctive reaction is to encourage you, with your expertise and Mr Conway's money, to launch a hostile takeover bid of Ontario Hydro to bring them to heel.

**The Chair:** I will permit a couple of minutes of rejoinder by Mr Conway later in the meeting.

**Mr Laughren:** All right, I'll accept that. At the beginning I wanted to ask you about the Ontario Energy Board and the AECB and what kind of relationship or links there are between the two organizations when it comes to Ontario Hydro's nuclear division. I appreciate that you deal with rates and they deal with safety, but is there any overlapping there, because sometimes the rates could affect safety and so forth?

**Ms Rounding:** We haven't really had any liaison with the AECB. We view it as two distinct, different functions.

We really look at nuclear from the point of being a cost-driver.

**Mr Laughren:** That's interesting because it seems to me you could make the argument that there is a link between rates and safety at Ontario Hydro. The argument has been made that because of the freeze on rates and the pressures on Hydro on rates, they didn't engage in the preventive maintenance they should have and reduced the staffing at the division.

**Ms Rounding:** I'm sorry, yes. You'll see in a couple of the summaries of our HR cases, we have expressed some concern about the level of staffing for maintenance and for safety. Although we haven't commented directly on safety, we've commented on that in terms of the O and M levels to make sure there were adequate levels there to ensure safety, but of course we didn't overlap with the jurisdiction to actually look at those safety issues.

**Dr Higgin:** The focus of our analyses was on performance; in other words, the capability factors that were being projected for the nuclear plants and the energy production forecasts that were related to those capability factors. They were obviously affected by a number of things including the level of O, M and A, and maintenance that was put into the plants. Those things also, of course, would affect safety and other things related to the operation of the plants.

**Mr Laughren:** Do you think there should be a closer relationship between the OEB and the AECB?

**Mr Dominy:** I just want to comment that in HR 22, which is the last time the board looked at Ontario Hydro in a broad way, there were presentations made by the then general manager of Ontario Hydro Nuclear who stressed the importance of safety as a key objective. They made the statement that financial constraints would never compromise safety.

In that report I think the board mentioned that they were encouraged by the improvement in the performance that was shown, at the time, of the nuclear units' higher capacity factors. They did caution that having been impressed by the improvement, they still were a bit concerned whether it would be sustained, but also identified in the board's concern that Hydro make sure there were adequate resources devoted to maintenance. That was the position the board took in HR 22. As I say, it's the last time the board has looked at it broadly.

**Ms Rounding:** I think an independent look at safety is probably a good idea, for instance, in the natural gas side. The Energy Act deals with safety issues. We don't administer that act; it's the Ministry of Consumer and Commercial Relations. But there is an independent look at it. I think it is very important.

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**Mr Laughren:** I personally think there is a relationship, and it should be a closer one than at present exists. I wonder if I could turn to page 5 of your presentation this morning which I found, as Mr Conway did, to be a helpful presentation.

In the second paragraph you list a number of recommendations. The paragraph starts, "The board has,



over the years, made recommendations with respect to nuclear decommissioning costs" etc. You go through a whole list of recommendations there to the end of the paragraph. You don't say to what extent they were complied with. Could you tell me what happened with those? You can start right at the first one, if you wish.

**Ms Rounding:** With regard to decommissioning, there has never been a separate or independent hearing, which we did recommend for a number of years. As we have indicated in HR 22, we did indicate that we agreed with Hydro's proposal to set up a separate decommissioning fund. That, I believe, has been done on the books, although not a separate fund per se. With regard to —

**Mr Laughren:** The irradiated fuel storage?

**Ms Rounding:** Because 18 and 19 were Dr Higgin's terms, I'm going to turn now to Dr Higgin for those.

**Dr Higgin:** Although it's a related issue to decommissioning, in 19 the focus was on the spent fuel management; in other words, the storage of spent fuel. The allowances that were made for that were based on a 40-year storage period, which the board felt was inappropriate and should be shortened. Whether it was based on that recommendation or Hydro's own analysis, that change was made to the lifetime for the provisions for spent fuel storage.

**Ms Rounding:** In addition, we provided the committee with the responses of Ontario Hydro to our recommendations from HR 17, 19, 20, 22 and 23. Of course they're quite extensive in each hearing, but if you were looking for more details, you'll find them there.

**Mr Laughren:** What I was really trying to get at was, if you were to look historically and try and summarize the response of Hydro to the OEB's recommendations over the years, what kind of picture would be painted?

**Ms Rounding:** As you are aware, I know they respond each year to our recommendations with the report that is in your package. With each recommendation they give an explanation for whether they either accept, agree or reject our recommendation and why. I know the committee requested statistics on that. We weren't able to supply statistics, because when you take a look at the response, sometimes they give a qualified acceptance of what we have recommended, and sometimes they give an explanation of why it is not possible to implement what we have recommended. It's very difficult to give a quantitative analysis, although Dr Higgin prepared some statistics on the acceptance and rejections in the 1980s, did you not? Would you be able to comment on that?

**Dr Higgin:** Yes. When I was there, with the board, the issue of what impact the board's recommendations was having on Hydro was still there. I did an analysis and it showed that in general the board's recommendations were being followed, at least as far as the general rate increase in the 1980s is concerned.

In other words, at that time the proposal was so much and there's a line that reflected those series of proposals, and then there was the board's recommendation and Ontario Hydro's actual rate increases. Over the period, although some years it was one way or another, the two

lines, the average lines, between the board's recommendations and Ontario Hydro's actual rate increases were quite close and much lower than the proposals for rates.

**Ms Rounding:** I could give you the details on 1990: Hydro accepted or agreed with 37 of the 49 recommendations. However, it rejected five of the seven key recommendations directly affecting the revenue requirement and opposed three of the four recommendations to the Minister of Energy on Hydro policy matters. And "accept" is defined as "agrees with the rationale and specific action recommended," and "agrees" is "agrees with the rationale but rejects the specific action." That 37 out of 49 may not be quite what it seems.

**Mr Laughren:** To what extent is the OEB proactive? By that I mean that if, for example, when you hear Ontario Hydro has a recovery plan in place that's going to cost anywhere up to \$8 billion or \$9 billion, to what extent are you allowed to be or are you proactive in saying, "Hold the phone, we're going to take a look at this?"

**Ms Rounding:** Unfortunately we have no mandate to do so. We can only do what is referred to us by the minister in the letter of reference with regard to Ontario Hydro.

**Mrs Barbara Fisher (Bruce):** I recognize the faces sitting at that end. We always seem to be across the table, though. I want to pick up a little bit what Mr Laughren just touched upon. I've watched a couple of things in shock for a number of years now: how in the end Hydro manages to get its way anyway, regardless of what you say or do or act or think or recommend. If I was sitting in any of these positions here this morning on your panel, I would probably be as frustrated as you probably are but aren't showing as much as you'd like to. I commend you on your professionalism here.

I want to get to one thing that I think we're missing here. You're appointed with a mandate and a responsibility to give recommendations, but the mandate and your appointments come from the minister, from the Minister of Energy and Environment, now from the Minister of Energy, Science and Technology. However, your recommendations of your findings in the case of Ontario Hydro, your Ontario Energy Board rate hearings, go to the Ontario Hydro board of directors.

Having been a participant in that process in the past on a number of occasions, and I'm now getting a little sensitive here to the community's emotional feelings on leaving those hearing procedures, I found it rather ironic that I think we were one of the very first-ever communities that came and made formal application to be heard at the Ontario Energy Board rate hearings with regard to electricity. It's maybe a phenomenon of the Bruce community that makes that happen, but so were they also in the regulatory body hearings with the AECB.

My questions go along this line: I often felt that you would have the parties in from Ontario Hydro with respect to each of the individual responsibilities of the vice-president offices. It could be a Clitheroe or it could be a Fox or it could be a whatever — whoever was there that day. Most of them seemed consistent over the past number

of hearings I've been at. But there's also this thing called "legal counsel." I would like an opinion as to how you feel when legal counsel makes recommendations to a board of directors — supports it vehemently, if I might use that word, at the OEB rate hearings on behalf of Hydro, as it's paid to do — and then it turns around and has some type of input as to the decision that's made as a result of that recommendation. How can anybody get in and make change? How can anybody have an influence?

We've reviewed a little bit the percentage of the number of recommendations that you've made versus the abysmal failure for them to accept those recommendations and act on them. Is there any connection? I see that position, that legal counsel representation at the hearings, no differently than a vice-president role in making the decisions at the board. I've been on the outside and watched it; I've been in the hearing process and watched what happens.

**Ms Rounding:** I think there is a distinction to be made, first of all, with regard to Ontario Hydro. Usually they use outside counsel to represent them at the hearing. They have a history of using the same firm over a number of years. Generally speaking, when it gets to — I'm not privy to this, of course, but with regard to the board of directors, Mr Leonoff is their general counsel, I believe he is on the board of directors and I'm sure he would be advising the board of directors, as opposed to the outside counsel who's involved in the hearing process.

**Mrs Fisher:** I think you hit the nail on the head when you said it's been consistent over a number of years. Whether or not the party moves from firm to firm or whatever, I can tell you that from the 25-year supply-demand studies forward, which are now obviously becoming the more important features of Ontario Hydro and where it's headed and where it's not headed and where it should be heading, it seems to me there's some consistency in the legal counsel representation to your board hearings. Am I right?

**Ms Rounding:** In recent years, Ontario Hydro — to correct myself a little bit — has started to sometimes use internal counsel. But over a number of years, there was consistency in terms of the external counsel they used, if I understand your question correctly.

**Mrs Fisher:** Yes. I find that the counsel who comes before the hearing process should not only be there to represent Hydro, but the best interests of the consumers and the constituents in Ontario. I didn't feel that was what was happening. Can you reflect on that?

**Ms Rounding:** Yes, I think their role is there to assist Ontario Hydro. The Ontario Energy Board has traditionally had board counsel who have played that public interest role in making sure the evidence is thoroughly canvassed in the interests of all the ratepayers in Ontario. That's really a role that's more proper for the Ontario Energy Board.

**Mrs Fisher:** I'd like to take it a step further then. At the beginning of these hearings I asked for a summary of the costs of all of the past hearings from, 19-whatever back; I can't even remember the year now, 1975 or

whatever. We got that; we got a comparative as well of the number of recommendations that were made versus those accepted. My feeling is that if a minister appoints a board with a mandate to make recommendations, and it's quasi-judicial and therefore something aside from Ontario Hydro and something aside from government, and it makes recommendations, one would think they should be listened to, wouldn't one?

**Ms Rounding:** One would hope so.

1010

**Mrs Fisher:** I won't go on that much longer. I think I made my point. I have one very quick question. Was the OEB consulted at all with regard to the 25-year supply-demand study?

**Ms Rounding:** There was one cross-appointment, Dr Connell. Although he had not actually served on the Ontario Energy Board, he was appointed to the Ontario Energy Board for the purposes of this hearing, so he never did actually sit on a regular OEB case.

**Mrs Fisher:** I do note that back as early as 1988 in one of the HR hearings, at least from the information we have, some concern was expressed with regard to the safety performance and the safety implications of Hydro. Am I right?

**Ms Rounding:** Yes.

**Mrs Fisher:** Let's get back to this issue of how you are appointed and who you answer to. After you make your recommendations to the Ontario Hydro board of directors, do you also send the minister a copy of the letter?

**Mr Dominy:** We report it to the minister, and the legislation requires us to send a copy to Ontario Hydro. The minister usually asks us to separate the recommendations out into those that are to Hydro and those that are to the minister.

**Ms Rounding:** But our full report is to the minister.

**Mrs Fisher:** So when there is an OEB hearing, has it been consistent history that it goes over to Hydro, and obviously you leave them to make their decisions based on your recommendations, but do you also then meet with the minister, and have you met with the minister, after each of the hearings to step through each of those recommendations?

**Ms Rounding:** We meet with the minister to brief him or her on our report.

**Mrs Fisher:** What I want to get at here is there doesn't seem to be a connect between regulatory licensing, the minister and Hydro. As we have gone through the past two weeks here, we have continued to see that. You are a major part of that connect — I personally believe you are and you should be — but it's not really happening, so I'm trying to get us to why it's not happening.

When the minister receives the report, you meet. Do you go through those recommendations in detail?

**Ms Rounding:** Whenever the minister requests it, we do.

**Mrs Fisher:** Has that been the history of what happens?

**Ms Rounding:** Sometimes it does and sometimes it doesn't, depending on the minister.



**Mrs Fisher:** Can you be more specific? Let's start back with the 25-year supply-demand study as your cut point. Come forward from there.

**Ms Rounding:** I'm not sure I'd be able to remember each one.

**Mrs Fisher:** Just to let you know why I'm asking this question, much of the process to date has hinged on what happened and why. It's not so that we can point fingers of blame so much as to go forward and get it right. That's my objective anyway, on a personal note.

I'm trying to get the connect here. If the minister knew consistently starting in 1988 that you had a safety issue and the AECB was telling Ontario Hydro in, at minimum, 1988-89 its issues with regard to safety, and if the board of directors knew that you were making recommendations to do something about that and if the AECB was doing that, and they seemed to be the only ones that have any not control but influence, or should have, over Ontario Hydro — I don't mean to put you on the spot here, but it's an important question.

**Ms Rounding:** I think that in recent years the minister has not necessarily always requested a briefing, but we have always made ourselves available to do a briefing. We have in fact briefed staff, and our staff has also briefed staff of the minister and of the ministry, so there has been a full exchange of information. If what you're getting at is to make sure that they understand where we are coming from in terms of all our recommendations, I think there is a thorough sharing of that information so they are familiar with where we are coming from in our recommendations.

**Mrs Fisher:** Maybe it just wasn't acted on, kind of like the recommendations.

**Mr Conway:** Ms Rounding, I want to come back to some previous questions. You are, as you say on page 2 of your brief, an economic regulator, and I think I understand that. We have before us in this committee quite a fascinating and remarkable recovery plan presented to the people of Ontario by the chairman of Ontario Hydro on August 13 that has very substantial consequences financially.

According to Hydro's own data, this multibillion-dollar recovery plan will put the utility, Ontario Hydro, in the next few years in a situation where they will be reporting negative retained earnings, where they are going to be reporting annual operating losses and where, according to Hydro's own data, they don't expect to be able to meet their statutory debt retirement obligations. Do any or all of those issues give you any concern over at the OEB?

**Ms Rounding:** Yes, of course they do. Those are all issues that would impact on rates, so they would all be something that we would take a close look at if there were a letter of reference to us with regard to any rate review proposals in the future and they would all be significant things that we would look at very closely.

**Mr Conway:** Do you want to just elaborate on the significance of those issues, the negative retained earnings, the annual operating losses and the inability to meet the statutory debt retirement obligations?

**Ms Rounding:** Dr Higgin would like to respond to that.

**Dr Higgin:** I can just speak to the benchmarks that were prevailing in the past, and they were based on expert testimony from financial experts. The prime consideration is gross interest coverage and maintaining those ratios recommended previously, 1.2 to 1.3, and also targeting, even under the current structure, towards a debt ratio of 80% debt, 20% "equity and reserves." I have no familiarity with the numbers you have just cited, but based on the board's experience, they would appear to be outside the benchmarks that we have applied in the past as being indicators of the financial integrity of Ontario Hydro.

**Mr Conway:** Would a reasonable person therefore conclude that a utility that was going to be facing a couple of years or more of negative retained earnings, annual operating losses — I think what I hear you saying is that a reasonable person might conclude that would have at some point a potential impact on rates.

**Ms Rounding:** Yes. We would be concerned about the financial integrity and the financial soundness, and those are two things that we look at each time we do a rate review.

**Mr Conway:** I was struck yesterday. A couple of Hydro board members made reference to the fact that the Hydro board appears to have a legal opinion that suggests the Power Corporation Act may not really impose a certain statutory debt retirement obligation on Her Majesty's provincial utility known as Ontario Hydro. Would that strike you as a bit strange, that that kind of a legal opinion might exist?

**Ms Rounding:** I thought it was a statutory requirement in the Power Corporation Act. Did you want to elaborate on that, Mr Dominy?

**Mr Dominy:** I'm sorry, I haven't seen the legal opinion, so I couldn't comment on that.

**Ms Rounding:** I'm unfamiliar with any such opinion.

**Mr Conway:** My memory is that the Ontario Energy Board has in the past tried to gain access to certain of these Ontario Hydro legal opinions and that you haven't been successful. Is that a correct understanding?

**Ms Rounding:** I have no experience with that, and I don't think either of my panel members do either. There have been times in the past when we have had difficulty obtaining information from Ontario Hydro, but I could not specifically say with regard to any legal opinions.

**Mr Robert Power:** Other parties.

**Mr Conway:** Legal counsel reminds me that other parties have tried to get these opinions, but just to be clear, your understanding is that the Power Corporation Act imposes a clear statutory debt retirement obligation on the utility, and that is your understanding of what the law requires.

**Ms Rounding:** That is our understanding.

**Mr Conway:** You would not be aware of any waiver that Ontario Hydro might be able to apply to exempt it from that statutory debt retirement obligation?

**Ms Rounding:** We're not aware of anything, but it's difficult without seeing the legal opinion.

**Mr Conway:** I want to come back to Dr Higgin. In earlier testimony, I thought I heard you say that, generally speaking, over the period of say 1985 to 1997 it would not be unreasonable to conclude that Hydro in its appearance before the board overstated operating successes and understated problems and costs, particularly on the nuclear division. Is that a fair —

**Dr Higgin:** I can't speak to the period from beyond 1991, but in the hearings that I was in, that was the pattern that emerged. This is not untypical of any regulated entity that is presenting forecasts. They tend to be somewhat overoptimistic on how much they're going to sell and what the revenues will be, and equally optimistic about their costs.

Generally what happens is that cost pressures come as a result of actual operating experience during the period when they're looking at the outlook for the next year, and then saying, "Heck, we can't meet those costs because we're already at this level now." Then they tend to update the costs upwards. That's a typical pattern that often occurs.

**Ms Rounding:** It's complicated by the fact of what I referred to in my opening remarks of the business cycle being out of sync so that there's always the excuse that the information is stale-dated.

1020

**Mr Conway:** Would your experience over the last few years be such as to make the committee — the committee is going to be asked to pass some judgement on this recovery plan. The recovery plan was presented to the board after a lot of good work done by Mr Andognini and his colleagues, but the board got the plan a few days before the board decided to accept the plan on August 12. They announced a move-forward plan on August 13 and it has billions of dollars of costs associated with it. I take it from what Dr Higgin said that the committee wouldn't go wrong if we were a bit sceptical about some of the numbers associated with these plans, based on your experience over the last four or five years.

**Dr Higgin:** I have no idea how well those numbers were tested by the people that submitted them to the board and what testing the board did. The general experience is that when you're forecasting, particularly difficult technical and engineering-based costs, based on engineering and technical improvements, the experience is usually that costs tend to go up, not go down.

**Mr Conway:** I want to come back, Ms Rounding, to the whole business about the future. You made a point that it would be in the deregulated electricity sector, particularly if the natural gas experience is any guide, it will be really important that the central market operating function be very strong and very clear and fair. Did I correctly understand you there?

**Ms Rounding:** And that there be fair access to the system.

**Mr Conway:** Do you have any particular views or observations you would like to share with the committee about the future, because clearly there are changes coming, there is going to be competition in the electricity

sector. One of the issues that is going to confront the public is the so-called disaggregation of the monolithic utility that we now have.

A very heated debate of course is whether or not — you yourself said the transmission function will probably remain a monopoly and for some considerable time the bulk of the generation is going to come from Ontario Hydro. A lot of people say that if we're going to have a reasonably competitive marketplace, we're going to have to deal with some of the obvious in-built conflict of interest that will be there. Do you have any views about the disaggregation of the provincial utility, particularly with a view to assuring fairness and open access?

**Ms Rounding:** Again, I guess I could go back to our experience in natural gas deregulation, and there's one point I should have added in terms of what we have learned, that consumer education is extremely important. We're finding right now in natural gas deregulation that the public still do not understand it. They don't understand the choices. There isn't price transparency so there are a lot of customers making decisions on inadequate information, and I think that's going to be a real key in the electricity industry as well, that people understand the process.

But in terms of disaggregation, one of the things that we have found in the natural gas industry, and I think it would apply equally to the electricity industry, is that if you're separating out the different business functions as to whether they're competitive or not competitive, it is much better if you can make a clean break. For instance, in gas, we are requiring that if they diversify into water projects, or you've seen some of the other projects at Consumers' Gas on the west coast they have been involved in, across the country, that they do it in a separate affiliate. We have a code of conduct for the relationship between the utility and any of their affiliates. Right now we only have a code of conduct for the marketing affiliates but we're working on a code of conduct for all affiliates to keep that separation so there's no cost subsidization.

**Mr Conway:** All right, and I understand that. But then one of the key questions is the relationship, in the electricity sector, between the transmission function and the generation function. From the point of view of economic regulation, do you have any view as to whether you would or should separate out, in a clear and discernible way, the transmission function from the generation function? I guess I'm trying to get to the point that there are those who argue that you'll never have a level playing field if the provincial utility continues to combine a substantial part of the generation and the transmission. Do you have a comment, from a policy point of view, as an economic regulator, about that relationship?

**Ms Rounding:** As a regulator, as I indicated from our experience, the more separation the better in terms of the regulator's job to make sure there is clear differentiation between the two functions, and in terms of access. I think it's really important to have a completely separate function.

**Dr Higgin:** I think you'll find that has been the basis of the operation of the Federal Energy Regulatory



Commission in the United States. They've found that that separation is desirable from a policy point of view and from a regulatory point of view.

**The Chair:** Thank you, Mr Conway. Mr Laughren. I'm sorry. Did you want to continue?

**Ms Rounding:** I just want to say it's particularly important for the access issues.

**Mr Laughren:** I think that some of us, and I'm certainly one those, feel that in the world that's unfolding before us — it may not happen this year or next year, but the energy picture is going to change quite dramatically. I don't think you have to be a rocket scientist or a nuclear physicist to see that.

If, when that world does come, and you have competition on generation, you would have Hydro presumably as one, and you would have all sorts of people feeding into some kind of grid or pool for power, then you would have the transmission itself and you would have competition at the retail level probably as well. That's one possibility out there.

If that was the world that would be there, what would you regulate? How would you pick as you regulated and would it be possible to regulate them under the present set of rules or would the present rules become inadequate?

**Ms Rounding:** No, we couldn't regulate them under our present rules. Our power is so limited it's purely at reference from the minister. In that case, if generation was competitive and there's a possibility of a competitive distribution market, although I tend to believe that's still going to remain a monopoly, we would just regulate the transmission, much along the lines as I think eventually we will do in natural gas. We'll just regulate the pipe lines.

**Mr Laughren:** If you regulate that, then people have to toe the line to feed into it. Is that the idea?

**Ms Rounding:** Yes, exactly.

**Mr Laughren:** I see. I think that many of us feel that the day has come already when the regulator has to have authority, not just play an advisory role. I think that's what's coming. I hope that's what's coming. There's enough evidence that the present system can't continue to work.

When you do work with Ontario Hydro, do you have any problems with them in getting information that you need? I'm not talking about the time element here — I appreciate the time problem where they get updated and so forth — but do you have any problems with actually getting information that you seek?

**Ms Rounding:** Sometimes we have had difficulty in getting information, yes. I know in the Ontario Hydro International Inc hearing that I sat on, there was some difficulty with regard to information that was claimed to be confidential. We eventually got some of that information by separating out those particular areas where Ontario Hydro claimed that there could be some commercial harm; but by not excluding the whole document, just those areas where there was some commercial harm. But it has been a problem.

**Mr Conway:** Costa Rica is a long way away.

**Mr Laughren:** How do you regulate a rain forest, anyway? I digress. I shouldn't have gone there.

**Ms Rounding:** I could say that when you're asking a question about where else we regulate, there's a possibility as well, depending on what the government decides, that we could have an oversight role over the central market operator, or if there were disputes or questions about the rules that the market operator use, we could be an appeal body to adjudicate those disputes or to take a look at those rules. That's a function the board could also play.

**1030**

**Mr Laughren:** Thank you for bailing me out. Now I recall what I was going to ask you about. When the minister sends a reference to you, a letter of reference or whatever it's called, then you undertake a hearing based on that letter of reference. Am I correct?

**Ms Rounding:** Yes, that's correct.

**Mr Laughren:** You then hold a hearing and make a recommendation, and that recommendation presumably goes to Hydro and goes to the minister. Correct?

**Ms Rounding:** Yes.

**Mr Laughren:** Is there any appeal after that? What happens if Hydro says: "Thank you, OEB. Blow it out your ear"? Is there any kind of appeal at all?

**Ms Rounding:** Appeal for whom? Ourselves or the other parties?

**Mr Laughren:** Appeal for you to say to the minister: "Look, Minister, for very good reasons we made the following recommendations to Ontario Hydro, and for whatever reason, they have chosen not to comply. Would you please revisit this or send me another reference letter?"

**Ms Rounding:** I'm afraid that has never happened, because it really is the board of directors of Ontario Hydro that makes that decision. Even the minister does not make that decision. I'm sure he can have some influence on Ontario Hydro, but we do not have that kind of appeal mechanism.

**Mr Laughren:** You're quite right about the minister's role too. We finally got it sorted out, I think, subject to legal counsel's views, that the minister cannot overrule Hydro, that if Hydro says, "These are our rates," that's it, and the minister can humph and harrumph all he likes. At the end of the day they can, of course, change the board of directors of Hydro once their term is up.

**Ms Rounding:** Unless there is cause.

**Mr Laughren:** That's right. Unless there is cause.

**Mr Conway:** You're talking about the notional minister, not the real minister.

**Ms Rounding:** I think that is correct. It is unusual. In many cases where there are crown corporations, the cabinet may have the ultimate decision rather than the board of directors of the crown corporation.

**Mr Doug Galt (Northumberland):** Good morning. As we listen to your presentation and other presentations, we hear more and more horror kinds of situations. I'd like to start out by asking you to reconfirm what I'm reading on page 2 in this document that was sent to us that

concerns rural rates. I'm thinking of my own riding of Northumberland.

At the bottom of the page, 1.3 —

**Ms Rounding:** Excuse me, sir. Is that in the background notes or in my brief?

**Mr Galt:** In the background notes. I'll just read the first statement for clarification:

"Ontario Hydro is not subject to the provisions of the OEB Act except when it proposes to change rates or charges to customers having an average annual power demand of 5,000 kilowatts or more."

Am I hearing that they don't even have to come before you people to change the rural rates, that they can do it at a whim any time they want?

**Ms Rounding:** Mr Dominy?

**Mr Dominy:** That is correct. The board's review relates to the wholesale power rates which are, as stated there, for a customer with a consumption above 5,000 kilowatts or a municipal corporation or a municipal utility.

**Ms Rounding:** Right now, Ontario Hydro regulates the municipal electric utility rates. We don't have any role in the retail rates.

**Mr Galt:** I thought you were a toothless tiger before. In your ability to do something with Ontario Hydro rates you're not even close to being a toothless tiger. From what you're telling me here, it's a kind of sounding board, maybe. You listen and you make a suggestion in some areas only — it's not all areas of rates — and then they don't even have to listen to you. It was just mentioned by Mr Laughren that the minister can huff and puff and make all kinds of sounds but has absolutely no control or power over what this monster of a monopoly can do.

**Ms Rounding:** Yes, that is true. We only advise on wholesale rates and no authority whatsoever over retail rates. Ontario Hydro regulates that itself.

**Mr Galt:** There was tremendous concern in my riding a year or a year and a half ago when the rates were adjusted. Now I'm starting to understand it was more than a gentlemen's or ladies' agreement that these average rates would be there, but over and above, it can go wherever they want, is what I'm hearing.

If you had broader powers to regulate and get some control and get some teeth back into the tiger, what kind of control would you anticipate, or fines, penalties? How would this be monitored? Would it be similar to gas, or how would you go about it?

**Ms Rounding:** I think we would be looking for would be a level playing field in terms of the method of regulation of both gas and electricity. Right now the gas regulation, unfortunately, though, is more constrained than we would prefer it to be. In fact I think there's a bill in the Legislature right now with regard to making a minor amendment to our act that would give us the power to bring in incentive regulation. I think we would agree to what Mr Macdonald recommended in his report, that there be lighthanded regulation both of the gas and the electricity sector.

Of course, "lighthanded" regulation means different things to people. Our recommendation would be that the board be given the flexibility to use different types of

regulation, because right now our hands are tied in the natural gas sector to using rate base rate-of-return regulation, and it's right in the act that we can't use any other method. As the market evolves, you sometimes have to evolve the method of regulation. Sometimes price caps are most pertinent, other times another method of regulation might be important, especially if you're regulating different sectors.

Regulating the transmission sector, you might use a different type of regulation than you would for the municipal electric utilities. Even if they were rationalized down to 20 to 30 municipal utilities, you'd still have to use a different type of regulation. You couldn't do a one-on-one regulation of each one of those. You have to have some flexibility, but I think we should move towards incentive regulation in both sectors.

**Mr Galt:** I'm absolutely intrigued by this suggestion of lighthanded regulation. I'd kind of like that on the 401 when the OPP pulls me over. It might be a little more tolerant and understanding. They don't seem to be. Are you suggesting that a lighthanded approach would be through disincentive? I can't imagine what kind of incentive we would give electricity rates. It's mind-boggling.

**Ms Rounding:** In incentive regulation we're trying to give them some incentives to keep their costs down by having a sharing of the savings. That's one method of doing it.

**Dr Higgin:** The big difference with gas is that it is investor-owned. There is a shareholder —

**Mr Galt:** Yes, all of us.

**Dr Higgin:** No. In the case of Hydro, but in the case of a gas utility there is a main shareholder. It used to be shareholders. As Ms Rounding said, that's the way in which incentives can work. You incent them to lower costs, and part of those "savings" become a bit of a higher return that these shareholders are able to make and part of them reduce the rates to customers. That's how, in general, the incentive scheme works.

Also, with a shareholder one of the prime regulatory mechanisms is to disallow costs from recovery in rates. Those costs then are still there or may still be there if they're not able to eliminate them, and in essence the shareholder then is not able to earn the same return they would have otherwise. Those are two differences.

**Ms Rounding:** With regard to the powers, when we restructured the board recently to move ourselves and ready ourselves for deregulation both in gas, and if eventually we get Hydro we should be prepared for that as well, we move away from more a hearing-type function, which is traditional rate-of-return regulation, to this more incentive regulation, where there's more emphasis on monitoring and compliance. The board could take on a different role. We would still have enforcement powers, but you would do it more through monitoring and auditing functions.

**Mr Galt:** I will just change the direction of my questioning. I'd like to move to the horrendous investment we have out there in nuclear. I'm told somewhere around 80% of the debt is related to nuclear facilities. We're at a



point where we have to make some recommendations. We've spent all this money. In your humble feeling, is it wise to continue down this kind of road because it's out there and it's costing, or is this a time to look for alternative directions and ideas? A loaded question.

**Ms Rounding:** I'm not sure it would be appropriate for me to answer that question.

**Mr Galt:** But it relates to costs and rates down the road. It's all part and parcel.

**Ms Rounding:** Are you asking whether we should turn in a different direction, away from nuclear?

**Mr Galt:** I'm asking, can we keep our rates at a better price, go in a new direction, in your opinion, or should we continue the nuclear route because we've been assured through AECB of the safety, that it's just a matter of performance that's a problem? As we change in performance to ensure safety, that relates to cost. There's a very direct relationship. That was discussed earlier, your relationship to AECB. I think you should be very closely related and talking back and forth regularly.

**Ms Rounding:** Costs are going to be very important to us. There's no question around that. But if we're truly going to have a competitive market, we've got to encourage other sources of generation as well that are going to compete with the nuclear.

1040

**Mr Conway:** I want to come back to you and your colleagues, Ms Rounding, in your role as an economic regulator, because we are seized with some very important business, which is to pass judgement on this recovery plan. One of the questions I think we owe answers to the public about are the economic and financial implications. You're the only economic regulator we have, and Dr Galt quite ably described the unique role you play in that respect.

I want to come back to the second-quarter report Hydro filed with various financial authorities and with the public. I think it was released after the recovery plan in late August or early September of this year. Again, I'm trying to look at this from the point of view of a ratepayer and as a citizen in Ontario. We're told in the second-quarter report that Ontario Hydro, in addition to the nuclear plan and problems — the laying up of the 19 reactors. Just reading from that report, the utility reports, "In addition to these nuclear-related financial impacts, Ontario Hydro is considering other asset write-offs or provisions which could total approximately \$2 billion in 1997." So in addition to the nuclear issues, they're telling the market that they're going to be considering asset write-offs of an additional \$2 billion. They're reporting that operating costs are higher than expected and revenues are lower than they were at this point last year.

So back to Dr Higgin's observations that the actuals are not as good as the projected. Revenues down, operating costs up; in addition to all this nuclear business, they're looking at an additional in-year 1997 write-off of \$2 billion. Then we get the extraordinary comment: "But we maintain our pledge not to increase average rates to the end of this decade."

As the economic regulator, how much confidence ought we to have in Hydro's assertion that against all of this backdrop, rates don't need to be increased for at least another two or three years?

**Ms Rounding:** It's obviously difficult for us to comment, since we haven't had a thorough look at the financials of Ontario Hydro since HR 22. From what you've said, it's obviously going to be difficult to understand, without looking at the financials, how they can do that without a rate increase.

**Mr Conway:** I want to come back to the statutory debt retirement. You're not aware of any provision, any mechanism, that would excuse the utility from that SDR, statutory debt retirement obligation?

**Ms Rounding:** We're not aware of any, no.

**Mr Conway:** I've been around this debate for a long time. Dr Galt, who has left us for the moment, very colourfully describes the peculiar non-regulation of Ontario Hydro, for which all the political parties are responsible. If there is one consequence of the dramatic developments of August 13, 1997, the day on which Mr Farlinger announced in the best Adam Beck tradition: "We've got problems, big problems. The Flat Earth Society basically was right all along. But we have a brand-new cure that will solve all these problems" — and they may be right. They've been wrong more than right, but this time they may be right.

It seems to me that the public ought to now get something they've never had, which is that rather than run around the Legislature and run around the advertising sheets of the daily newspapers, Hydro ought to be made to go down with their recovery plan to you people, and you people ought to be given a mandate to have a thorough and binding oversight of this plan. Would you have the resources presently to provide, in the public interest, the kind of oversight of this recovery plan that the public might expect?

**Ms Rounding:** It would be difficult to do it with our present resources, but we've taken on greater challenges in the past. I think it's something we could take on. One of the difficulties, as you have indicated, is that once the plan has been agreed to and implemented, we will have to deal with any rate reviews in the future which will have the implications you mentioned earlier on, and it's a little difficult to do it after the fact.

**Mr Conway:** There's a cultural issue. I was struck by Andognini's very interesting report about the cultural problems inside the nuclear division. He's an expert and I'm not, but one of the cultural environments I'm interested in has to do with Hydro and its long history of non-regulation. If you think about it for a moment, it's really an incredible situation that we've all allowed to occur. Now, Adam Beck was doing God's work, and God's work generally doesn't need regulation, as you can understand. We have a situation where a provincial utility, doing God's work, providing a vital resource, which is for that very reason enormously sensitive and therefore political, was unregulated: a monopoly, doing God's work, that was unregulated over a period of about 90 years.

One can only imagine the kinds of behaviours that develop inside that culture, inside that corporate world. Do you want to just share with the committee any additional observations about the kind of culture that has developed at Hydro after decades of that kind of activity? I think it is important, because we want to change that. That's got to be changed.

One of the great fictions, from my point of view, and I spent five and a half years in government — the Minister of Energy was minister of everything, but not for Hydro, by and large. The minister responsible for Hydro was the Premier. That's a very happy state of affairs, because he or she is the busiest person in the government. If I want to have a minister, that's the kind of minister I want, because I'll tell you he or she is going to be easily distracted. But very few people out there and a lot of academics don't seem to understand that: The Minister of Energy is only the notional minister where Hydro is concerned. The real minister is the Premier. That's an operating reality, and has been for a long time in this province.

What additional information on that culture do you want to share with this committee, particularly as we think about a new framework that is hopefully going to provide more thorough and more binding regulation, not just of Hydro but of other players in this new world of electricity competition?

**Ms Rounding:** We're obviously not privy to the culture within Ontario Hydro. I guess the only culture we experience is within the hearing process itself. We see a difference in culture between the natural gas utilities and Ontario Hydro.

**Mr Conway:** What are some of those differences?

**Ms Rounding:** I think we find that the gas utilities, because they come before us time and time again as an economic regulator, recognize that cooperating and providing information is probably better in the long run, and I think we have had some frustrations in terms of the amount and type of information supplied by Ontario Hydro. In fact, in the OHII hearing I did suggest, I think to Mr Strong, that Ontario Hydro might want to talk to the gas utilities with respect to the type of information and evidence they filed in a timely and thorough fashion in the gas hearings. I was at that point, I think, expressing some frustration.

**The Chair:** Thank you, Mr Conway. Ms Johns?

**Mrs Helen Johns (Huron):** I think we're seeing consensus around the table that there needs to be more teeth in the Ontario Energy Board. From that standpoint, I want to move to the other people who may wish to enter the energy market in the future. They obviously have had some bad experiences from the fact that Ontario Hydro hasn't been regulated in the past. I guess they will be looking to a regulator with some teeth to be able to keep a level playing field open so they can enter that marketplace. Can you tell me the kinds of opportunities or things you need to see or the changes you need to see in legislation to be able to provide these new market players with the guarantee that you'll provide a level playing field for them?

**Ms Rounding:** There would have to be a complete rewrite of the legislation. There is no regulatory authority right now, so we would have to have a complete regulatory framework set up along the lines of gas. It would have to make it clear over which areas we would have authority, what kind of authority, the enforcement powers, and the question of whether we would have any authority over any of the other players in the market. Right now there are some questions being raised as to whether we should have some licensing authority over the gas marketers. I think Mr Macdonald recommended in his report that there be licensing of the electricity brokers as well. That might be something that would be considered, whether we had legislative authority over licensing of those brokers as well.

**Mrs Johns:** You're obviously optimistic about the prospects of having a more toothful regulatory body.

**Mr Conway:** Toothful?

**Mrs Johns:** Toothless, toothful.

**Ms Rounding:** I think it's fair to say that we would like to get some teeth and I think we would like to be fair in our regulation as the energy sectors become more one. They're converging and it's very difficult to have a lopsided regulatory framework.

**1050**

**Mrs Johns:** I just have a manpower issue. We've heard so much about human resources over the past three weeks, and the lack thereof, so let me ask you this question. Obviously right now you have seven members — maybe one board position is empty. You do natural gas right now. Tell me if the contingency of human resource people that you have at the Ontario Energy Board could handle this, or what kind of expertise we would need to be able to find that would supplement your ability to regulate this.

**Ms Rounding:** We spend some of our time right now on Ontario Hydro matters even if our decisions aren't binding. When we get into a regulatory rate review, it obviously takes our resources to the same extent it would if the decisions were binding, although we have not had a complete rate review in the last few years. So we do have certain resources already and certain expertise that's directed to Ontario Hydro matters.

If we were to take on a full regulatory framework with Ontario Hydro, I think there's no question that we would have to have additional resources in all sectors in terms of expertise. We have, as I indicated before, recently re-organized the board and restructured it so we were in a position where we could add on positions fairly easily to accommodate such a challenge.

**The Chair:** Mr Conway, time for one quick question.

**Mr Conway:** Just a final observation: I have found your testimony extremely helpful and I really appreciate it. I think that the committee is in your debt. I know I am. I just can't be more fulsome in my appreciation for the candour and the directness with which you've answered questions. You've certainly give me, and I suspect all of the committee, some very helpful advice, particularly on the future that's to come.



**The Chair:** I have just a couple of questions to ask before you leave the stand, Ms Rounding, to clarify a couple of points.

Out of a response to Mr Conway concerning the issue of Hydro rates and the promise to maintain stability of rates until the end of the decade — your response led the committee to believe that it would be difficult to maintain that envelope. I assume you meant that within the current structure of the generating body at this point, but in fact rates might be maintained or not if there was a change in the way in which Hydro is generated and so forth. Would that be fair?

**Ms Rounding:** It's possible, yes. It's very difficult for us, without seeing the financials, to make any kind of definitive statement on that. For instance, I don't know what they're looking to write down in 1997, what's behind all that, so it would be very difficult to say. But I guess on the face of it, it's difficult to see how they can make all those adjustments and keep rates even to the end of the century.

**The Chair:** That's assuming you stay with the existing model.

**Ms Rounding:** Yes. If the model were to change —

**The Chair:** If the model were to change, then it would follow that it's now an open analysis, that rates could go down, they may be stable, whatever.

**Ms Rounding:** Yes. If they're a competitive market, things could change dramatically and you couldn't predict that.

**The Chair:** Thank you. I just wanted to make sure I had clarified that.

The other point I wanted to pick up on flows from questioning by all members of the committee, and that deals with the financial health of Ontario Hydro, which to my mind at least is the very foundation of many of the issues that are banded before us at this point. Certainly the financial health of Ontario Hydro affects both the rates and the safety issues that are of some paramount concern to many members. We're trying to determine how Ontario Hydro is regulated in that regard, who regulates the issues that are involved; identify the issues over which there is no regulation.

We've seen that the Atomic Energy Control Board regulates safety at one end. The question I put to you is, who regulates the overall financial wellbeing of Ontario Hydro, in your mind? Indeed, if there is no overall regulatory control of that, who ought to be doing that?

**Ms Rounding:** Ontario Hydro does it right now. Obviously there is no regulatory control. If we were asked to regulate Ontario Hydro, we hope we could do that.

**Mr Conway:** There's a very important clarification arising out that second-last exchange between the chair of the board and the Chair of the committee and I want to be clear about it. This is on the rate question: If competition begins in the electricity sector, the Chair's question seemed to suggest and brought an answer, "Yes, rates could go down."

I thought I understood yesterday that even the Hydro board understands that if they face competition in the next couple of years, the financial pressures, particularly in

debt retirement and other issues, could put Ontario Hydro in an even more precarious situation. Did I wrongly understand that?

**Mr Power:** That's a concern, yes.

**Ms Rounding:** It's possible that rates could go up too, initially, in a competitive market. Nobody could make any predictions right now.

**Mr Conway:** I'm not disputing that rates could go down with competition. I'm thinking about Ontario Hydro and its financial plan. I thought I heard the board members say yesterday, "If we face competition in the next few years, it could impair further the financial — particularly the debt recovery, the debt retirement."

**The Chair:** It may or may not and that is indeed a question requiring financial evaluation by all parties. My concern was to clarify the picture so it wasn't just leaving an impression that changes in rates could not happen or would happen, given the current structure, that there would be other possibilities and they would yield different results.

**Ms Rounding:** Yes, that's correct.

**The Chair:** That's all I wanted to know for clarification of the committee.

**Mrs Johns:** Can I ask for a point on that too, since we're asking, on your last question?

**The Chair:** We weren't. I was just trying to finish up that moment, frankly, Mrs Johns. I want to thank you so much in that regard. I'd rather not reopen this matter now. The Liberal caucus did formally complete the questioning.

**Mrs Johns:** It is unfair, and you were being a reasonable Chair.

**The Chair:** Mrs Johns, so you will bear with me and know why, I'm trying to continue to be scrupulously fair, and as the day unfolds I think that will be increasingly evident. Thank you for your indulgence.

**Ms Rounding:** I thank you very much for attending upon the committee. I echo the comments of all members of the committee that the presentation you've brought, including Mr Higgin and Mr Dominy, have been very helpful for this committee and we appreciate it very much. I hope you will be prepared to accept an invitation to return if it's necessary.

**Ms Rounding:** Thank you very much, Mr Chairman, and members of the committee. We were delighted to be here and we would certainly return if you found that helpful. If we could provide any further information, we would be happy to do so as well.

**The Chair:** Counsel may be forwarding other questions along to you over the next week or two and I'd appreciate your immediate response where possible.

**Ms Rounding:** We would be happy to assist.

**The Chair:** Thank you very much for attending upon the committee. You're excused for now.

1100

#### BRITISH ENERGY

**The Chair:** Our next witness will be Dr Robin Jeffrey, of British Energy. If Dr Jeffrey is able to find his way to the witness stand, I would appreciate that. I remind

members of the committee we have up to two hours to meet with Dr Jeffrey. I welcome you to the committee. We appreciate your attending upon us. We are prepared to receive any deputation you may wish to make. Just before you begin, if you would be good enough to identify yourself and your colleague for Hansard, then we can proceed with any comments you wish to make and then move around, by caucus, for various questions. We're in your hands.

**Dr Robin Jeffrey:** Chairman, thank you very much for the invitation to attend here this morning. I appreciate the invitation from you and your colleagues on this committee.

My name is Robin Jeffrey. I am deputy chairman of British Energy. With me this morning is Robert Armour, who is the company secretary of British Energy. I thought it would be helpful if Robert were to come with me this morning, since in the restructuring of the nuclear industry that's taken place in the United Kingdom over the past few years, Robert has been one of the key players in that and I thought his advice would be of interest to the committee as well as my own.

**Dr Jeffrey:** I had circulated a document that looks like that, which I hope everyone has in front of them. I'd like to lead the committee through that document and enlarge on the various points starting on page 1, and I think it might be of interest just to give a bit of my own background.

I've had some 40-plus years' experience in the power engineering industry in the UK. I joined Babcock & Wilcox boilermakers, Renfrew, when I was 16 in 1956, and they put me through a student apprenticeship which was in part at college and part in the works.

I then spent a number of years at Cambridge University, taking a doctorate in fluid flow. In 1964 I returned to Babcock and worked with them in research and development activities associated with a wide range of boiler plants. Some of it was nuclear, some of it was gas-fired, oil-fired, coal-fired. My final position with Babcock was as the head of the engineering research and development activities.

In 1979 I joined the South of Scotland Electricity Board, which was state-owned, reporting to the Secretary of State for Scotland. That is the company that provides all the electricity, vertically integrated, to the 5.5 million people in Scotland. I joined them to head up their technology division. Then, from 1980 to 1988 I was responsible for the construction of the most recent advanced gas-cooled reactor in the UK at Torness. I headed up the construction of that nuclear power station.

In 1988 my familiarization with restructuring and privatization began because at that time I was appointed the chief engineer of SSEB but seconded to head up their privatization think tank. That work culminated in 1990 with the first restructuring of the industry in the United Kingdom. At that time, SSEB was split up into a private sector company, Scottish Power, and the nuclear part of the company stayed under state ownership.

In 1990, when that was done, I remained for two years with the private sector company, Scottish Power, as one of

their managing directors. Then in 1992, I moved back into the state-owned sector to be chief executive of Scottish Nuclear, which ran the two nuclear power stations in Scotland.

In 1996, when the new nuclear plant in the United Kingdom was rationalized into British Energy, I became deputy chairman of British Energy and I continued as chairman and chief executive of Scottish Nuclear. That is my present post, deputy chairman of British Energy, a privatized company, and within that, chairman and chief executive of Scottish Nuclear.

I have participated very deeply in two major restructurings in the UK. I have gone from the private sector to the public sector to the private sector to the public sector, and I am currently in the private sector.

I thought it would help if I just briefly outlined my background. The evidence that Robert and I will outline to you this morning will help you to understand what's involved in the restructuring of major utilities.

Perhaps it would be helpful, Robert, if you would just like to speak briefly.

**Mr Robert Armour:** As Dr Jeffrey has mentioned, I am company secretary of British Energy. That combines the role of corporate counsel and corporate secretary. I am qualified as a lawyer, a solicitor in Scotland.

I came to this industry acting for independent power producers under the 1983 Electricity Act in the UK, which was the first of the acts to open up the electricity industry to independent power producers. Then, when the industry was restructured in 1989, I was brought in to establish the legal and administrative framework of the nuclear company in Scotland, Scottish Nuclear, which supplies around 50% of the generation in Scotland. Over the course of the next four years, I acted in that role and in a variety of other capacities, looking after information systems, the culture change program in the company and so forth.

In 1995, I was designated as company secretary of British Energy in the second restructuring of the nuclear industry. As part of my role, I had to look after the legal aspects of restructuring and flotation of the industry through 1996. I am currently company secretary of the privatized company, British Energy PLC.

**Dr Jeffrey:** If I could direct you to page 2. Chairman, I would be perfectly happy either to give the presentation and deal with questions or, if the committee thought it helpful —

**The Chair:** If you wouldn't mind, if you'll do the presentation so we have it totally encapsulated, then we can proceed with questioning. Thank you.

**Dr Jeffrey:** Right. On page 2, that dials the clock back to 1989. At that point in time, the intention of the government in the United Kingdom had been to privatize the entire electricity supply industry, nuclear as well as fossil. That had been the intention.

Towards the end of 1989, there was a lack of confidence in the city of London that nuclear could be successfully sold off. Initially it was decided that the old stations, the Magnox stations, first-generation stations, should be withdrawn from the sale. Then in November



1989 the government decided that if it were to stick to its timetable, it had to remove nuclear totally from the sale, and that was done. So the privatization that took place in the UK in 1990 was everything other than nuclear. It was coal-fired-generation hydro; it was transmission; it was distribution; it was end sale of the electricity to the customers.

1110

It was a very traumatic time for people who were engaged in the nuclear industry at that stage. The reason why there was lack of confidence in the city that nuclear could be privatized I think was for four reasons.

The first of these is the uncertainty of the costs of decommissioning. In the 1970s and 1980s, the estimates of the costs of decommissioning, shutting down nuclear power stations, had steadily increased, and there was no confidence that people knew the technology and no confidence as to what it would cost.

The second is that in the UK, spent fuel is dealt with through reprocessing in order that you can extract the uranium and reuse it in new nuclear fuel. The plant which was being constructed in the UK to carry out reprocessing had gone through a very difficult public inquiry and there was again no confidence in what the costs would be and whether this plant would ever be brought into commission.

The third reason for concern was how to dispose of the final waste products, how that would be done. There had been discussion of a deep repository in the UK and there was uncertainty on where that would be and how much it would cost.

Finally, the nuclear industry had commenced the building of the new pressurized water reactor at Sizewell B and there was a lack of belief that this could be built to budget and to program.

On that basis, the UK government decided that the straightforward thing to do was to pull nuclear lock, stock and barrel out of the sale and get on with privatizing everything else.

Page 3 shows you what was done at that time. The first three boxes on the left, National Power, PowerGen and Nuclear Electric PLC, were the generating bits of CEGB. National Power was floated as a private company containing only fossil. PowerGen was also floated as a company containing only fossil. Nuclear Electric PLC stayed in state ownership. The National Grid Co was split out into a separate transmission area. The 12 regional electricity boards which previously had been state-owned were sold off as 12 independent, separate, private sector companies.

On the left-hand side going further down, Scottish Nuclear was created as a new company split out of the South of Scotland Electricity Board, and the rest of the South of Scotland Electricity Board was turned into Scottish Power. That remained a vertically integrated company with generation and transmission and supply to end customers.

**Mr Laughren:** Sorry. Was that state-owned?

**Dr Jeffrey:** Scottish Power was sold off into the private sector.

Scottish Hydro-Electric, which previously had been the state-owned North of Scotland Hydro-Electric Board, was sold off into the private sector as Scottish Hydro-Electric.

Those were the changes that were carried out in 1990, and there were a whole raft of contracts put in place at that time, some of them between, for example, Scottish Nuclear and the other Scottish companies and some of them between Scottish Power and Scottish Hydro-Electric. There was a huge quantity of legal work and restructuring contracts, and many of these contracts were designed to run about 50 years.

**Mr Conway:** Everything on that grid was privatized except the nuclear bits?

**Dr Jeffrey:** Everything was privatized other than Nuclear Electric PLC and Scottish Nuclear, yes. Everything.

**Mr Laughren:** I thought you said Scottish Nuclear was privatized.

**Dr Jeffrey:** No, at that stage, in 1990, Scottish Nuclear stayed under state ownership. So Nuclear Electric PLC, state-owned; Scottish Nuclear, state-owned; everything else sold off into the private sector.

At that time, in 1990, the government said it intended to review in four years' time, in 1994, how these arrangements had settled down. It said that in 1994 it would revisit the status of Nuclear Electric and Scottish Nuclear. In 1990 it also put in place what was effectively a state subsidy for nuclear power. The intention was that this state subsidy would be phased out over the next eight years.

**Mr O'Toole:** Actually, the transmission grid, is that public ownership or state?

**Dr Jeffrey:** In 1990, what happened was that the 12 regional companies —

**Mr O'Toole:** They were privatized.

**Dr Jeffrey:** — which were privatized, owned the transmission system.

**Mr O'Toole:** But privatized.

**Dr Jeffrey:** But it was privatized. Since then it has been sold off as a separate private sector company.

If you turn to page 4, the objectives which were then given to the state-owned nuclear companies, Nuclear Electric and Scottish Nuclear, are as set out there.

Safety was to be the number one priority and on no account was to be compromised.

The commercial performance of the company had to be improved because the state-owned companies were now selling into a private sector liberalized market, so the commercial performance of the company had to be improved.

The two companies had to move over a period of eight years to being able to operate commercially without any state-owned subsidies. It was set out in 1990 that these subsidies were to be phased out.

The uncertainties that I referred to earlier of decommissioning and waste management etc, the companies had to address and resolve these various issues which had made privatization of nuclear impossible.

Finally, the companies had the responsibility to make sure that the new major capital project, Sizewell B, of about C\$5 billion was constructed to program and cost.

I ask you to turn to page 5.

**Mr Galt:** I'm not clear about Sizewell B. I don't follow.

**The Vice-Chair (Mr Monte Kwinter):** That was a new major nuclear facility.

**Dr Jeffrey:** Yes, it was the new capital project that was begun in 1988, a pressurized water reactor called Sizewell B.

**Mr Galt:** Sorry, I missed that.

**Dr Jeffrey:** On page 5 —

**Mr Conway:** That eight-year subsidy began —

**Dr Jeffrey:** It began in 1990. Robert, would you like to summarize?

**Mr Conway:** It's 1990 to 1998, roughly.

**Mr Armour:** Yes. It didn't actually extend to 1998. It started at around 10% in 1990 and there was a charge, a levy on electricity sales, which was to subsidize nuclear and renewables. In practice it was removed on privatization. But we'll come back to that.

**Dr Jeffrey:** In 1990, when it was set up, it was to proceed for four years and then it was to be halved. Then in 1998 the original plan was to remove it altogether.

1120

**Mr Conway:** The original plan was a state subsidy declining over a period of eight years directed at nuclear only?

**Dr Jeffrey:** As a technicality, it wasn't actually a state subsidy. It was a levy on the end sale of electricity that was then provided to the nuclear companies, so in effect it was a subsidy.

**Mr O'Toole:** If we're going to move along, if I may, in that subsidy, was it to defer any capital cost or debt load or liabilities of the state-owned nuclear over that period?

**Dr Jeffrey:** The principal purpose was that it was recognized that the first generation of nuclear power stations — some of them had been closed down; the ones that were operating were recognized to be uneconomic. It was to offset the poor economics of the first phase of nuclear built in the UK.

**Mr O'Toole:** But who held the debt? Were they debt-free, even the old plants?

**Dr Jeffrey:** The debt was within the state-owned company. That was where the debt was.

**Mr O'Toole:** Who is going to end up owning it?

**Dr Jeffrey:** Can I deal with that later on?

**Mr O'Toole:** Sure. Move along.

**Dr Jeffrey:** In 1995 the government carried out its review. It was called the Nuclear Review. It was the equivalent to some extent of the white paper that is being considered in the province here. It was a government review of where nuclear had got to, and the outcome of that review was that in the intervening five years, the performance of the nuclear companies had been transformed. The uncertainties of decommissioning had been resolved through the engineering studies and the detailed costing.

The reprocessing plant had been successfully brought into operation. There had been a lot of progress in terms of ultimate waste disposal. The new nuclear plant at Sizewell had been constructed to budget and to program and was operating well.

The government decided at that time that the seven modern, advanced gas-cooled reactors and the pressurized water reactor could be successfully sold off into the private sector. They created a new company called British Energy as the vehicle to do so. The ownership of the seven AGRs and the pressurized water reactor was transferred into British Energy, and the government stated that that would then be floated off into the private sector.

The first generation of nuclear plants, the Magnoxes, of which three had been closed down and five were still operating, stayed within the state-owned sector under a new company that was created called Magnox Electric PLC, and Magnox Electric PLC had all the liabilities and debt associated with the first generation of plant.

**Mr O'Toole:** But the state —

**The Chair:** Mr O'Toole, we did agree we would complete the entire envelope and then we'll go into questioning, and I'll be very happy to go from there.

**Mr O'Toole:** On a point of order, Mr Chair: The previous Chair was much more friendly.

**The Chair:** Now having reported on the Vice-Chairman, I will deal with him during the lunch-hour. Thank you, Mr O'Toole, for telling tales out of school, and shame on you.

**Dr Jeffrey:** would you continue with your presentation. We'll have the envelope completed, and then I can have the caucus in line, in proper rotation.

**Dr Jeffrey:** Yes. When the cat is away, the mice will play.

With respect to British Energy, the company to be privatized, all of the debts, liabilities and uncertainties were transferred into that company. There was no retention of any sort by the UK government of debt or risks associated with the company to be privatized. British Energy was to be totally responsible for decommissioning, responsible technically and responsible financially. The government then decided at the point of privatization in 1996 that the subsidy that we referred to earlier, which was planned to continue to 1998, should then be phased out for all of the activities of British Energy, and so that subsidy ceased two years ahead of the government's initial plan.

Page 6 then shows you how the companies were restructured. On the left-hand side, Scottish Nuclear Ltd, the Magnox which was closed down was transferred into Magnox Electric. The two AGRs flowed into British Energy. On Nuclear Electric PLC, the five AGRs and the PWR were transferred to British Energy, and the six operating Magnox and the two closed-down Magnox went into Magnox Electric, state-owned.

The next page gives you a little bit more detail of the seven AGRs, which are the orange squares, and the Sizewell B pressurized water reactor. The committee might find it helpful if I say that the construction of the



early AGRs transferred to British Energy started in the late 1960s, and they were brought into service in the mid- and late 1970s. Therefore, they are roughly contemporaneous with Pickering 1 to 4 and Bruce 1 to 4. The Magnox stations were of an earlier generation than the Candu reactors here.

The more modern AGRs of Heysham 2 and Torness, work started onsite on them in the late 1970s, and they were brought into service in the late 1980s. Therefore, broadly, they are contemporaneous with Pickering 5 to 8 and Bruce 5 to 8.

Construction on the Sizewell B pressurized water reactor started in 1988, and it was brought into service in 1995. Therefore, it's roughly comparable to Darlington.

Turning to page 8, this shows how the market was restructured and how it stood in 1996. British Energy, just moved into the private sector, had about 21% market share; National Power, 22%; PowerGen, just under 20%; Magnox Electric, the state-owned company, 6%; in Scotland, the privatized Hydro-Electric and Scottish Power, 6.5%; and others, IPPs and some electricity bought over the interconnector from France etc, 25%. I think that diagram shows that there was a genuine liberalization of the market, there was genuine competition, and in a minute I'll come to what that means in terms of quality of service and prices.

The move within the UK market is an increasing move to gas generation and an increasing move to the number of independent power producers. It's actually quite remarkable when you see the number of projects that are currently being developed within the United Kingdom.

### 1130

So British Energy came into existence as a private sector company in 1996. I'd like to take you through some of the changes that have taken place over the period of British Energy.

Page 9 shows the performance of the AGRs and the pressurized water reactor over the past six years. It's an increase in output of some 64%, and that increase in performance has come about by technological improvement on the plant, increasing the plant reliability, increasing the onload refuelling capability of the plant, reducing the period of outages and increasing the time between outages. I emphasize that the company's number one objective is safety first, and all of these changes were achieved whilst actually continuing to improve the safety culture and performance. I'll talk about that in a moment.

Page 10 shows the reduction in the cost of generating a unit of electricity from these eight plants. The definition of nuclear cost you will see on the next page, but what that shows is in constant money values, in the money values of 1992, a reduction of 36% in the cost of generating a kilowatt-hour of electricity from these eight plants.

**Mr Laughren:** That was all the plants?

**Dr Jeffrey:** That's the average of all eight plants.

**The Chair:** Just disregard the questions for a moment, Dr Jeffrey.

**Dr Jeffrey:** Overleaf, on page 11, that shows the elements of the cost of manufacturing a unit of electricity.

"Fuel" is both front-end new fuel and also the provision made for waste management, waste disposal and decommissioning of the plant.

Page 12 shows how these eight plants, originally under their two separate owners and then in 1996-97 under British Energy — how a loss of about C\$600 million at the operating level has been transformed into a profit of almost \$700 million. Interesting to note that when the shares in the company were initially sold, they were at £2, and they are currently trading, as of yesterday, on the stock exchange at £4.14.

Page 13 shows two things. The purple histogram shows the reduction in staff from a little bit over 8,000 in 1992 down to 6,300 as the average for financial year 1996-97. That number is actually about 5,900 today, so there has been a steady reduction in the number of people employed in the various headquarters and in the plants. The orange line shows the increase in productivity. That is kilowatt-hours per person employed. Productivity has been almost doubled, up by 96% over these years.

I think it's that issue of reduction in staffing where it would be appropriate for me to say something about safety. The number one value of British Energy is safety first, and that comes in our corporate set of values higher than our number two corporate value, which is profit through progress. Our number one value is safety first.

If I try and quantify the improvement in safety which has taken place over the past six years, with respect to industrial safety — that's the trips, slips and falls, lost-time accidents that happen in every manufacturing workplace — in the United Kingdom there's an independent authority called the Royal Society for the Prevention of Accidents, and their highest recognition is what they call gold awards. Six of our power stations received gold awards last year. One of our plants has received a gold award for six years running.

The incidence of accidents, which is called the lost-time accident rate, or the number of accidents where people are off work for more than a day per 100,000 hours worked, has fallen from 0.92 down to 0.27 over the past six years. So it's fallen down to a third of what it was previously. At the beginning of this week, on Monday, we received the first gold award to be given in Scotland by the UK government as being the company that looks after the health of its workforce best. That is very important.

If you then think about nuclear safety, since 1990 there has been only one nuclear event on these eight plants at what we call level 2. There has been nothing any higher than level 2. The level 2 incident that took place was a valve on a diesel oil tank that was closed when it should have been open, and that could have meant potential unavailability of some plant if it had to be brought into service. There would have been more than adequate time for people to have tried to start the piece of plant, find it hadn't started and go out on to the field. So it is not a nuclear incident in any form or shape. It was potential unavailability of a piece of plant, and that would have been addressed through our procedures.

If you look at the radiation dose that our workers receive, that has steadily fallen throughout the years and is about one fourteenth of the world average.

We've achieved all of these enhancements of safety culture operating in a very active commercial framework because of the training and the quality of our people. We operate what we call a "no blame" culture. We operate a system that we call "near miss-reporting," that if any employee of the company sees something that causes them concern that it could potentially result in a lost-time accident, they report it and it's dealt with. Those improvements can only be achieved through people. People are vitally important.

Page 14 will need a little bit of explanation of what it is, but that shows the improvement in the quality of supply service to end purchasers of electricity in the United Kingdom.

Each year the regulator, Professor Littlechild, publishes an annual report on the quality of service to end customers. If I could give you just one example, "repair fuse" is at the one at the top of the page. If the fuse blows at the inlet side to an end customer, whether it's a house or whether it's someone's works, there is a specified time within which the supplier of electricity has to go there and repair it. If that is not done within the specified time, the supplier — and remember, I told you earlier about the 12 privatized distributors — is fined and the fine is paid to the person who has suffered the inconvenience. There is a total of 12 such parameters that are annually published in the UK, and it's not so much that you've been fined; it is the fact that in your peer comparison with the other distributors or suppliers your performance is seen to be poor.

What that spider's web shows, the outer one, is the position as it was in 1992-93. So if you look at the repair fuse, there were about 100 occasions on which suppliers were fined. The green line is 1996-97. The number had fallen to I think about 17. So against all these 12 criteria of quality of service, the net result of the liberalization and the introduction of market competition in the United Kingdom, you can see there has been a substantial improvement on all 12.

1140

Finally on page 15, that shows the prices to end customers. There are four lines there. The blue one is domestic customers; the yellow is small industrial; green, average industrial; and red, large industrial. That's shown in cents per kilowatt-hour.

The important thing about that is that for all four categories of customer there have been reductions in constant money values, in real money values. There have been reductions in the price paid by the end purchasers of electricity, varying from 10% to 14% over the piece.

I apologize if that's taken rather a long time, but that was my presentation. Robert and I would be very pleased to deal with any questions.

**The Chair:** Dr Jeffrey, please don't apologize. That was a fine presentation, very helpful, and gives a good overview for us now to begin the questioning.

**Mr Galt:** Mr Chair, on a point of privilege: I've had a request to have the air-conditioner turned off.

**The Chair:** We have dealt with that matter and we are now adjusting it either off or warmer so that it provides more comfort for members.

**Mr Laughren:** The Vice-Chair probably dealt with it.

**Mr Galt:** How long before we expect to see a response?

**The Chair:** It will be in God's fullness of time.

**Mr Galt:** Thank you, Reverend, sir.

**The Chair:** Picking up on Mr Conway's comments — although I do note the comments from the millionaire's row here. I have to keep a very close eye on it.

**Mr Conway:** I warn you, Hydro, like other divine authorities, is watching and willing to wreak vengeance.

**The Chair:** Can we now carry on with the appropriate kind of questioning? Let me begin with Mr Laughren.

**Mr Laughren:** Thank you, I think.

I enjoyed your presentation very much. It's very clear and very succinct. I wanted to ask you about the decommissioning and disposal issue on the nuclear. I don't know whether you have the same kind of nuclear waste we do with our Candu system. I don't know and others don't know the answer to that.

**Dr Jeffrey:** Broadly, yes.

**Mr Laughren:** So you do have the spent fuel rods.

**Dr Jeffrey:** Yes.

**Mr Laughren:** Did you store them in what we call swimming pools here as well? The lay language is that they're stored in water after they are —

**Dr Jeffrey:** I swam in a swimming pool in Toronto this morning and I can assure you there was no spent fuel in the pool I was in.

**Mr Laughren:** Was the water warm?

**Dr Jeffrey:** The method of dealing with spent fuel is that when it comes out of the reactor, it is very radioactive, and the practice throughout the world is to put it into what's called a pond for a period of time while much of the initial radioactivity cools off. What then happens in the United Kingdom is that the spent fuel is transported to Sellafield, where it is reprocessed and the uranium separated from the rest of the material in order that the uranium can be reused into new nuclear fuel.

I think within Canada the arrangement is to store in a pond for a very much longer period of time and then to directly dispose of the spent fuel rather than to reprocess. Someone will correct me if I'm wrong on that.

**Mr Laughren:** I think that's correct. The way you describe it, it sounds like it's so logical to do it the way you're doing it, but I don't know enough about it to know why we don't do that here as well. That's not for you to answer, I suppose.

**Dr Jeffrey:** I think it's all to do with economics. Irrespective of whether it's stored in a pond for 50 years and then disposed of directly or whether it's reprocessed, it will be done fully compliant with the demands of the safety case, and therefore, through either route, it is safe.



**Mr Laughren:** In your country, is there no spent fuel to worry about, then? Do you just keep recycling? They must reach a point —

**Dr Jeffrey:** No. Having taken the spent fuel and put it through the reprocessing plant, you separate out the uranium — and we've talked about that — you also separate out the plutonium, and you end up with what is called highly active waste. Some of the other products are classified as highly active waste. The plant I referred to earlier, which is now operating fully in the UK, takes these highly active wastes and turns them into solid glass, into a rock-like substance. Then that has to be disposed of in a repository in very much the same way as you can choose to dispose of the spent fuel rods.

**Mr Laughren:** That's helpful. That's getting to where I was seeking information, that at some point you have to decide what to do with that spent fuel.

**Dr Jeffrey:** Yes.

**Mr Laughren:** Have you decided that yet? Do you bury it?

**Dr Jeffrey:** If you look worldwide, the nuclear industry believes that the correct way of dealing with high-level waste, whether it's the solid glass or whether it's spent fuel rods, is to encapsulate it and put it underground in a deep repository. In certain countries like Finland and Sweden these deep repositories are advanced, and there are some repositories for intermediate-level waste already functioning. It's not a difficult technology.

At the same time as the United Kingdom was reviewing nuclear power, it also reviewed radioactive waste management. The United Kingdom's strategy is to have a deep repository for high-level waste available round about 2080. It is planning to have an intermediate-level waste repository somewhat earlier, although recently there has been a rejection of a planning consent for the intermediate-level waste repository. There's a bit of uncertainty as to physically where that's going to go, although the technology and the approach are clear.

**Mr Laughren:** I don't think we've reached that point in our country, as to what to do with that. I don't think there's any agreement on storage at all.

When we talk about decommissioning a plant that's no longer a nuclear reactor, that's no longer useful for whatever reason, that's totally different than dealing with the spent fuel rods, right? My understanding was that the plant itself becomes radioactive. I don't know if that's true or not. How do you decommission and control the cost of decommissioning a plant that's no longer in use?

**Dr Jeffrey:** Over the 30 or 40 years when the nuclear power plant is operating, it produces spent fuel rods. So throughout the period of operation, those have to be dealt with. When ultimately the power plant is shut down, the stages of decommissioning are, first, to take out the inventory of fuel that's in the reactor at that point in time and deal with it in the same way as you've dealt with all the other spent fuel throughout the 40 years. That is established technology. It's worthwhile saying that removes, I think, something like 99.5% of the radioactivity from the site.

**Mr Laughren:** That's what I wanted to know.

1150

**Dr Jeffrey:** The second thing is, you demolish everything other than the reactor core itself and the areas that have been contaminated. That's just like decommissioning a coal-fire power station. You knock down the turbine hole and the administration building. You then leave the reactor core for a period of time, and when the radioactivity has decayed to an acceptable level you chop it up, encapsulate it and put it into the deep repository that we talked about earlier. Then the site is ready to be reused for other purposes.

**Mr Laughren:** Is it safe to say that you and your colleagues did not shake in your boots when Tony Blair was elected as Prime Minister?

**Dr Jeffrey:** We did not shake in our boots. The Labour administration in the UK believes in a balanced energy strategy and recognizes that in order to have sustainability and security, you want to generate in part from hydro, in part from gas and in part from nuclear.

**Mr Laughren:** Has the politics been taken out — I mean that in a positive way, I hope — of the whole issue of privatization of power in the UK or is it still a big issue politically?

**Mr Armour:** There is a divide between the parties on how far to go on privatization. The privatization route we went through in 1996 did not encounter as much opposition as had been thought but, if one also goes back, many of the power stations in the UK on the nuclear side were instructed when the last Labour government was in power. So at that time there was not a hostility to nuclear. At the present time there is in the runup to Kyoto a look again by all parties saying, "How are we going to find a generation mode that will allow us to meet our greenhouse gas aspirations?" So it's an open question.

**Mr Laughren:** We have had a lot of information here from the UK on the privatization of water. I'm not saying I've got the whole picture, but the information I've received — and I have a bias to which I confess which is, generally speaking, against privatization — was very negative about the privatization of water — if that's true. I'm not sure I'm getting objective information, but if I am, is it true in the UK as well that there's a lot of antagonism towards the water privatization issue?

**Dr Jeffrey:** I think the problem with water is that there isn't a national grid to distribute water in the same way as there is a national grid to distribute electricity, therefore the privatized water companies are still local monopolies. The important thing about the graph I showed you earlier of market share of British Energy, National Power, PowerGen and the IPPs is that people, wherever they are in the UK, can buy their electricity competitively. They cannot buy their water competitively.

**Mr Laughren:** What about the price regulation of electricity? Is there any?

**Dr Jeffrey:** Oh, yes, and the document I referred to earlier — there is the office of electricity regulation. There is a regulator. He has very strong and powerful teeth. He progressively has moved the UK. Initially in 1990 it was

only customers who took more than one megawatt who could buy competitively, in 1994 it became everyone above 0.1 megawatts and in the spring of next year it is every customer. So the office of electricity regulation is a very important office. Every year he publishes a series of annual reports, and that was one of his reports that I was quoting from earlier.

**Mrs Johns:** Thank you for being here. You presented us with some great documentation, both before and today. So I'd like to thank you first of all for that.

I understand you're going to be cautious in your analysis of the IIPA report and the recovery plan, but I was wondering if you could answer this for the committee: Do you see similarities between the Ontario system and Britain at any time over its changing ways, over its evolution in nuclear energy?

**Dr Jeffrey:** Although I've read the documents you've mentioned, I've not studied them and it would be quite wrong for Robert or me to make any comments on these specific documents. I think the relevance of what's happened in the United Kingdom is the improvement to the end users of electricity in terms of improvement in quality of supply and improvement in prices. It's probably fair to say that for those of us who have been running these industries, there's no question at all in my mind that as being part of a competitive market, everyone has to work extremely hard and it's very demanding. But at the end of the day the fact that as an electricity supply industry we're reducing our prices and we're improving our quality of supply gives enormous pride in being part of this very important industry.

**Mrs Johns:** I understand from the research I did that you have, and I think you said, a great deal of nuclear experience and education. Can you tell me if you have confidence in the Candu reactor?

**Dr Jeffrey:** Yes. Let me start by saying that in a sense there's been some similarity between the way in which Canada had enormous pride in its development of Candu and the United Kingdom had enormous pride in its development of the advanced gas-cooled reactor. To some extent both countries were running against the stream, which was concentrating on volume water reactors and pressurized water reactors. For many years the Candu reactors had a very high reputation indeed in terms of their high load factor and their performance, the fact that they had 100% on-load refuelling. So although by no means am I an expert in Candus, they were reactor systems that have operated extremely well and I believe should be able to do so.

**Mrs Johns:** I spent many years in the stockbroker business and I'd like to say that your return on investment since you've been made public is quite a rate of return. Have there been stock splits or any of those things? Have you had stock splits or dividends to your shareholders in that time frame?

**Dr Jeffrey:** Yes, that's Robert, in terms of our share option scheme.

**Mr Armour:** We were privatized in 1996 on a partly paid basis. Originally investors were asked to subscribe

effectively £1. They received a return of effectively 17% in dividend in the first year. At the end of the first year there was a second instalment of a further £1, which has taken the stock initial value to £2. The amount of stock in issue has not changed during that whole period.

**Dr Jeffrey:** In terms of our employees, because earlier I emphasized that you only achieve a performance like this through your staff, through your people, at this point of time 98% of all our staff have shares in the company.

A few months ago we also did something that we believe is highly innovative. We gave share options to everyone in the company. Usually share options are limited to the team of top executives or maybe senior managers, but all our employees have been given the opportunity to take up share options.

**1200**

**Mrs Johns:** Do you attribute part of that philosophy to the output per employee increase that's so substantial, on page 13?

**Dr Jeffrey:** That is for the future. I think that will help and be a factor in the future. If you look at what's been achieved, we have run for many years a scheme which we call gainshare, and that is for every \$3 of extra bottom line that is created over and above the corporate plan, because the output is higher than the corporate plan or the reduction in controllable costs is greater than the corporate plan. For every \$3 to the bottom line, the company keeps \$2 and the members of staff get \$1. The way that operates is that for everyone in the company, whether it's a storekeeper or a director, it's a flat lump sum that can be round about C\$4,000 paid in a year. It's a very significant and motivating sum. It's not just in terms of the financial indicators. There are also factors fed into that of what we call safety, quality and excellence moderators. So the safety performance of the company has got to improve as well.

**Mrs Johns:** British Energy, which is your nuclear position, basically has competition from National Power and PowerGen, and it has competition, I would assume, from outside sources also. Other companies have come in since that point, independent power brokers?

**Dr Jeffrey:** Yes.

**Mrs Johns:** So in that time frame, that competition no doubt has led to some of the reduced pricing you have graphed out on pages 10, 11 or 12. Can you comment on how much independent power has come into the system? I know there were these three companies that were state-owned. What have we had come in from outside of those three state-owned organizations?

**Mr Armour:** As well as National Power and PowerGen, which operate in the England and Wales market, other established producers were Scottish Power and Scottish Hydro-Electric. Since 1990, we have seen a huge move in the UK towards gas generation. Much of that has come in through independent power producers, many from outside, from the US, from Finland, and as result of oil majors, shall we say, teaming up with other companies, particularly ABB and manufacturers of kit, and they will team up to produce new power plants, so that



we're now talking about 25% of the UK market produced through gas generation. Some of it is gas owned by National Power and PowerGen. Most of it is gas capacity owned by other companies.

**Dr Jeffrey:** Maybe about 20 or 30 significant owners of IPPs. But if you then look at renewables, anyone who wants to develop a small wind farm can come in as an independent producer. There may 100 renewable projects, maybe even more.

**Mrs Johns:** Magnox, the company, seems to be the real loser in this issue. It has the debt, it has all the liabilities from previous times, and you start off with all the perks of having a corporation here with really no capital costs associated with you, as I understand from what you've told us today. I have a couple of questions here. Your cost of power doesn't have any capital assets associated with it, so you obviously are not on a level playing field with the gas generators that are coming in. My second question is, it seems to me that the taxpayers or the ratepayers are on the hook for this money in Magnox. Who got hit and how did they get hit and how equitable was that?

**Dr Jeffrey:** First, if you remember the operating costs, the pie charts I showed you on page 11, the depreciation is 21% and that is a capital charge. That recognizes the capital investment.

**Mrs Johns:** Does that go to Magnox then? You collect it and it goes to Magnox?

**Dr Jeffrey:** No. British Energy is a totally freestanding company owned by shareholders.

**Mrs Johns:** So any dollars of debt that were incurred to build that plant went to British Energy?

**Dr Jeffrey:** Correct.

**Mrs Johns:** So even if there were huge capital cost overruns like we might have here in Darlington, where it was \$4 billion and it ended up being \$12 billion, you got all \$12 billion of that baby?

**Dr Jeffrey:** Correct, with one qualification, which is the book value of Sizewell B. As a financial transaction, the book value was written down. That's a balance sheet issue; that's a number on a balance sheet.

**Mrs Johns:** So it was written down.

**Dr Jeffrey:** Yes, but that's a different issue from debt, which is, you owe a bank a billion dollars.

**Mrs Johns:** Yes, I understand.

**Dr Jeffrey:** The debt attributable to all of these eight plants, any debt was transferred into British Energy. There is this 21% depreciation charge within British Energy. British Energy, when it moved into the private sector, took with it C\$8 billion in liabilities. That \$8 billion is in respect of, for example, spent fuel which had been removed from the reactors in their operating life up until that point of time and was with BNFL in their swimming pool, in their pond, waiting to be reprocessed, because the arrangement there is pay as you go. So all of the debts and liabilities, all of the cash issues associated with these eight plants, transferred into the private sector.

**Mr Armour:** It would be worth saying there was intense scrutiny of this transaction by the European

Community to ensure there was no state subsidy, and very close watching by the other competitors in the market.

**Mrs Johns:** And it would work out to be the same proportionate amount too, six reactors.

**Mr Kwinter:** I enjoyed your presentation. I enjoyed your presentation when I heard it a few weeks ago as well. When you talk about restructuring, this is something we are waiting for with this white paper, which will give us an idea of what the government's strategy is on restructuring. One of my concerns is that when this restructuring took place — one of the things this committee is charged with is taking a look at the recovery, as opposed to restructuring, and that recovery, although you say you have read the report, the IIPA, and the recovery plan, you haven't really studied it at great length. When you assumed these assets, were any of them in the situation where there were massive amounts of capital required to bring them up to serviceable levels?

**Dr Jeffrey:** Yes. Obviously, on the new pressurized water reactor, the answer to your question is no, because that was a state-of-the-art new plant that was operating extremely successfully and that in service has turned out to be one of the world's best pressurized water reactors. With respect to the seven advanced gas-cooled reactors, five of the earlier ones, I should think on each of them for a number of years we spent about £20 million per year. So it's £20 million times five — about C\$200 million per year for several years in order to achieve the increased performance that came up on some of my performance graphs, but also in order to bring them up to a standard where they would meet the more demanding safety case requirements that as an industry we're now faced with.

1210

**Mr Kwinter:** In your business case scenario, when you evaluated these things, that wasn't an impediment to turning them over to the private sector?

**Dr Jeffrey:** No. It's almost the other way around. In order to be able to say to our shareholders, "This is good-quality plant; it's going to operate for another 10, 20, 30 years," in the prospectus for the flotation of British Energy, which is this rather detailed 240-page document, we addressed the state of health of all of the plant and could make confident statements regarding the ongoing life and commercial viability of the plant.

**Mr Kwinter:** The Magnox facilities were not included and they remained state-owned.

**Dr Jeffrey:** Correct.

**Mr Kwinter:** Was that because they couldn't fit into that criteria?

**Dr Jeffrey:** Three of them were already closed down and the others had got a relatively limited life, only another five or so years, and therefore they weren't a viable business proposition.

**Mr Kwinter:** But right now they are still producing about 6% of the energy.

**Dr Jeffrey:** About 6%, yes.

**Mr Kwinter:** But that means that in just a very short time frame they won't be producing anything?

**Dr Jeffrey:** Progressively over the next few years they will retire, unless the owners believe that it's worthwhile continuing to invest.

**Mr Kwinter:** When you say the "owners," you mean the state?

**Dr Jeffrey:** I mean the state, yes.

**Mr Kwinter:** Are those the only facilities that the state owns?

**Dr Jeffrey:** In terms of electricity, yes.

**Mr Armour:** Yes. The state owns the other parts of the nuclear cycle in terms of reprocessing and the fuel production, but otherwise it has privatized the whole of the electricity industry.

**Mr Kwinter:** When the state had the monopoly, and I'm trying to compare it to the Ontario situation, when they did, did the state pay taxes? I assume they didn't. There were no taxes assigned to the facilities. Was there any guarantee by the state of the debt?

**Mr Armour:** There was. All the publicly owned corporations are subject to a treasury guarantee. That treasury guarantee, of course, no longer applies to our company now it has been sold off. The companies were, I believe, liable to tax but in many cases they had large capital building programs which could be set against tax. So in general, the amount of tax paid was very little.

**Dr Jeffrey:** When Scottish Nuclear and Nuclear Electric were operating between 1990 and 1996, still under state ownership, the arrangements for doing that were quite interesting and they might be relevant to your deliberations.

If I take Scottish Nuclear, although it was still state-owned, it was a limited liability company under the Companies Act, in which the shareholder just happened to be the Secretary of State for Scotland. But it was constructed as a private sector PLC would be constructed, with a chairman and chief executive and board and non-executives who ran the company in the way in which you would expect a private sector PLC to run a company.

**Mr Armour:** This was deliberately to, first of all, bring slightly more commercial discipline to the running of the companies and also to replace a board procedure which had preceded that, where the companies were established by statute but were not subject to the Companies Act and the general legislation.

**Dr Jeffrey:** It's a sort of halfway house between being state-owned and being privatized.

**Mr Kwinter:** Prior to the privatization, was the Office of Electricity Regulation in existence?

**Mr Armour:** Not prior to 1990. It came in with the privatization of the first wave of the industry in 1990. Prior to that, the whole of the industry was under government control and therefore it was more following to answering to the minister.

**Mr Kwinter:** So there was no regulation prior to the privatization?

**Mr Armour:** There was a variety of regulation. There would be the nuclear installations inspectorate under the government, but in general, the economic regulation, the commercial regulation, would be subject to government

discussions with the generating boards that were then in place.

**Mr Kwinter:** The last thing I want to talk about is the transmission. You state that the transmission grid has also been privatized.

**Mr Armour:** Yes.

**Mr Kwinter:** Has that created any problems in the way of stranded assets? I'd just also like clarification. You've got the National Grid Co, which is a private company, I assume, and you've got Scottish Power. Is that just because of geography, or are they competing grid companies?

**Dr Jeffrey:** No, the National Grid Co is a bit of a misnomer. The National Grid Co applies to England and Wales. In Scotland, Scottish Power is responsible for transmission in its licensed area and Scottish Hydro-Electric is responsible for transmission in its licensed area. But the National Grid Co, there were no stranded assets. It was the same issue that all debts, all liabilities, everything was transferred into the private sector, and it has proved to be a very effective private sector company that is now actively participating in the acquisition of transmission systems overseas.

**Mr Kwinter:** Are they regulated by the Office of Electricity Regulation as well?

**Mr Armour:** Yes. National Grid is subject to OFFER. OFFER is the Office of Electricity Regulation.

**Mr Conway:** I want to pick up on the point that Ms Johns made earlier and it has to do with assets and liabilities, particularly with respect to reactors. Can you just clarify, Dr Jeffrey, as you understood it, at the point of privatization, your estimate of the liability or debt associated with each of your reactors and the corresponding revenue stream for each of those reactor sites?

**Dr Jeffrey:** The company, when it publishes its accounts or for purposes of the flotation, does not distinguish between the eight power stations, although within its management accounts obviously it does recognize this and people are set appropriate targets. But it's a company which owns eight power stations. When the company was privatized, the assets were transferred into British Energy. All of the assets and all of the liabilities associated with all eight plants were transferred into British Energy.

**Mr Conway:** I'm trying to get a more specific calculation. If you take the pool and break it out on an average basis, what was the average debt per reactor at the time of transformation and the average income stream annualized per reactor?

**Mr Armour:** It's very difficult to be exact because at the time, when it's historical cost accounting, the cost of building a reactor in 1975, which would be a few hundreds of millions —

**Mr Conway:** How much debt was there in 1996? At the point you became a private company, what was the debt assigned to each reactor and what was the revenue —

**Mr Armour:** The company was created with seven hundred million of debt, which is owned by the government and which they —



**Dr Jeffrey:** UK sterling: £700 million UK sterling.

**Mr Conway:** We may want to do this through a written correspondence because I think that's important data to get as we think about a corresponding situation with Ontario Hydro. I'm just trying to get some comparison on the basis of our actual experience with your reactors versus what our situation would be with our reactors in Ontario Hydro Nuclear.

1220

**Dr Jeffrey:** But it's not done on a reactor-by-reactor basis. We do not keep our PLC accounts like that. The tangible assets of all eight power plants — and what I've got here is our annual report and accounts and we'll give you a copy of that. It shows the value of the eight reactors — sorry, it's not that there are eight reactors, there are eight power stations, so seven of these power stations have got two reactors. It's actually a total of 15 reactors, which is a little bit similar to Ontario where you've got 20 reactors. So there are eight power stations, seven of which have got two reactors, and therefore a total of 15 reactors. In our books the tangible assets of the 15 reactors and the value of our various offices etc is £5.1 billion UK sterling. When the company was created it had £700 million UK sterling debt. Since then, we've paid off a lot of that debt.

**Mr Conway:** And the income at that same point from those 15 reactors?

**Dr Jeffrey:** Was £1.9 billion sterling. But it's all here in our accounts.

**Mrs Johns:** I just want to ask one question. Is that the initial financial statement? Could I borrow that for a few minutes?

**Dr Jeffrey:** This is where the questioning is going to get very detailed, isn't it?

**The Chair:** Dr Jeffrey, thank you. Picking up on Mr Conway's point, there may be a number of questions that will flow out of today and I'd appreciate your written responses to help us in this regard.

**Dr Jeffrey:** Yes, we shall do that.

**The Chair:** I want to make sure there's an appropriate comparison, we understand that we're dealing with apples and apples and so forth.

**Mr Laughren:** A couple of questions, part of it being triggered by some of Mr Conway's questions. I don't understand how the value of the asset was established when it was privatized.

**Dr Jeffrey:** It's quite straightforward and it's actually a very important and interesting —

**Mr Laughren:** Robert is looking a little quizzical about that statement.

**Dr Jeffrey:** No, it's straightforward and it's actually a rather important private sector concept, which is, you forecast the future profit stream coming from the company. That is, you model the selling price of electricity from the plants and you model the cost of running the plants and you then discount that at the appropriate rate that financial advisers agree with the government. That is then a measure of the profitability of the company over a future pay rate of years on which to base the value of the company. The value of the company has got nothing at all

to do with the value of its assets. It is what is going to be the profitability of this company and therefore establish the viability of the company to pay dividends to its shareholders.

**Mr Armour:** But I would say if you can get a tight answer from a merchant banker that tells you what the valuation of a reactor is with its liabilities, you're doing quite well.

**Mr Laughren:** Did that become an issue at all?

**Dr Jeffrey:** The negotiations associated with privatization are extremely complex and difficult and sometimes lurch from crisis to crisis.

**Mr Armour:** Like any negotiation.

**Dr Jeffrey:** Practical solutions have got to be found.

**Mr Laughren:** I wanted to ask you about the chart on page 15 of your presentation. It has to do with price reduction; not so much the price reductions but the variable rates that seem to underlie this chart. Do you have different rates for large industrial, average industrial, small industrial-commercial and average domestic?

**Dr Jeffrey:** These are the prices paid by the end consumer.

**Mr Laughren:** Correct.

**Dr Jeffrey:** And that doesn't bear an immediate relationship to the cost of production. These are the prices paid by the end consumer, recognizing the costs of distribution, of supply, of generation, of transmission etc.

**Mr Laughren:** You don't necessarily set those rates yourself?

**Mr Armour:** The rates are not set. Different parts of the market — to understand the UK market, in 1990, when the first privatization occurred, the large industrial users, over one megawatt, that was an open market that anyone could compete for. The market has gradually been liberalized so that it took it down to the 100-kilowatt level a few years ago and in 1998 we move to a situation where any household can buy from any supplier. The price is set by competition between suppliers. It is in the retail market increasingly capped by the regulator, but in practice it has not had to be capped in many of these markets because the price has been driven down by competition.

**Mr Laughren:** The reason I ask that is we've lived in a world here of a monopoly, just as I gather you did before, and the one comment that I have received since this committee was struck, and some phone calls I received and so forth, has to do with the fears by some that if we were to privatize our system here, the large industrial users would end up with a very, very good price for their energy, to be subsidized by the domestic user because of the power of the large industrial user. I live in a community where Inco and Falconbridge are both located and they have enormous purchasing power. I think Falconbridge is the largest energy consumer in the province. There is a fear that's what would happen and that they'd end up being subsidized by the domestic user.

**Dr Jeffrey:** That is where the power of the regulator is so very important because he has access to all of the company accounting information and he has to form a

view as to whether the pricing policy being established is fair for the end regulated users.

**Mr Laughren:** Which is why the regulator must have power?

**Dr Jeffrey:** Yes.

**Mr Laughren:** You wouldn't disagree with that.

**Mr Armour:** The other thing is the regulator in the UK operates under what we call an RPI-X regime. The target set to the electricity distributors is inflation less a figure. If they can reduce their costs faster, they do well. But the incentive is there to reduce prices.

**Mr Laughren:** The only other question I had has to do with the life expectancy of the nuclear plants. It seems to me that here, and I'm not an expert on this, they started out with life expectancies of 40 years and now people are saying it's more like 25, and even then you've got all this retubing and so forth that has to be done in that interim period, so that the whole idea of life expectancy has more or less gone out the window. I'm wondering to what extent you've had to deal with that problem of life expectancy.

**Dr Jeffrey:** To a very considerable extent I think is the answer. I can't comment specifically on the Candus but, in general, engineers are incredibly ingenious people and if there is a problem with a plant, they will be able to analyse it, understand it and engineer a method of retubing or replacing a vat or cutting out a weld and replacing it. They'll be able to do that to the necessary demanding safety standards. The issue is what is it going to cost and is it economic to do it. I think life expectancy broadly is not an issue per se; it is, what is the cost and is it worthwhile to make the investment?

1230

As far as the AGRs are concerned, in our books they are shown to have approximately 30 years. They vary from reactor to reactor, but they are in our books at about 30 years. The company is very confident of delivering the statements made in the prospectus, that at the end of March 1998 we will have completed all the work to justify going from 30 to 35 years on four of those reactors, and in a year's time to complete the same exercise for another four of the reactors. The size will pressurize whether the reactor is in our books at 40 years, and we are confident of achieving at least 40 years from that plant.

**Mr O'Toole:** Mr Chair, I'm going to share my questions with Mrs Fisher. Just quickly, I'm going to move to your chart on page 8 which talks about market share. I understand that whole pie chart represents 100% of the market, not just the nuclear.

**Dr Jeffrey:** No, 100%.

**Mr O'Toole:** What I'm really wondering is British, your particular firm, has 21%. That's your max load capacity or whatever, based on some ability to share in the marketplace. You're at 21% of the full capacity of the —

**Mr Armour:** No, it's sales, not capacity.

**Mr O'Toole:** That's really my question. Who allocates the base load and the peaks and valleys? Who says when your plants go down and up? Do you submit a business plan that says, "Here's our scheduled maintenance outages?" There's got to be a base load supply and

somebody has got to perform the high-cost peaks. Where the real cost to power is the peaks, that's the cost. When you look at this, who sets those shares in the base load?

**Dr Jeffrey:** The arrangement for selling generation in the UK is an arrangement called the pool. I don't know whether that's something you've studied and you know about.

**Mr O'Toole:** No. Just that somebody is a broker.

**Dr Jeffrey:** Right. There is a broker called the pool. All generators bid into the pool, and they do so 24 hours ahead. They say, half-hour by half-hour, "This is our price for supplying so many megawatt-hours for that half-hour." The pool then purchases, starting at the cheapest schedule, and the price everyone gets is the price of the most expensive bid-in for that particular half-hour.

**Mr O'Toole:** That suffices for my needs, but I think there are other people listening. The other one I have is somewhat unrelated. I don't think that Mrs Johns's question or Mr Conway's question with respect to the plight of Magnox has been completely answered. Perhaps with Mrs Johns looking at your statements, I don't think that will show what we need to know about that. They're holding two decommissioned plants and some other sick liabilities, in my view. I'm not particularly satisfied with the response but I'm going to use my question to go to page 13.

On page 13 you talk about the reduction in manpower, really, or the increase in output per manpower, however you want to state it. A couple of questions there. You did talk about two things. I have not heard you mention the word "union" but I did hear you mention "profit-sharing," and a word we hear a considerable amount is the "culture" and the "turnaround attitude." Have you got the same employees as you started with? You've turned everything completely upside down, from a \$600-million loss to a \$600-million gain, and the slope is exactly negative in the same proportion when it comes to manpower. Tell me about the culture. Are you using the same people top to bottom? Is there a union? That's a simple question.

**Dr Jeffrey:** The answer to that is yes, and I will address that in just a minute.

**Mr Conway:** Say that again very clearly so that you all hear that.

**Dr Jeffrey:** The answer is yes.

**Mr Conway:** The evil union.

**Mr O'Toole:** I didn't say "evil." I said —

**The Chair:** Let's be steady here, please. The wealthy members are getting upset.

**Mrs Johns:** There is some problem here, isn't there?

**Dr Jeffrey:** I will come back to that.

**Mr O'Toole:** Profit-sharing is inconsistent with that.

**Dr Jeffrey:** I'll answer all of these questions precisely. As to your comments about not being satisfied with what I'd said about Magnox, I just want to restate that all of the debt and liabilities and costs associated with Magnox were ring-fenced and put into the Magnox company, and all the debts and liabilities and costs associated with British Energy were put into British Energy company. These matters were scrutinized in very great detail by a



select committee of the UK Parliament and they were satisfied that what had been done was fair and proper.

Having said that, I'd like to go back —

**Mr O'Toole:** They have eight plants and 6% of the grid capacity. They have eight plants, two are down and six are up.

**Dr Jeffrey:** Three —

**Mr O'Toole:** I don't want to get into that. Actually, I want the union one answered.

**Dr Jeffrey:** Three are down. Could I come back to the unions as well, because I think that's very important. The structure of unions within British Energy, they are the same unions now as they were when we were under state ownership. There is a professional engineers' union called the EMA, the managers' union. These represent the more highly paid people in the plants. There are also craft unions, two or three of them, and there are also clerical unions. The industry is unionized in precisely the same way now as it was dial the clock back 10 years ago.

I think the important issue is not so much that we've turned it upside down — maybe we've done that with its performance — but in terms of the evolution of the culture, it has been a steady progression. If you take Scottish Nuclear, every one of our employees was put through a commercial awareness course. It didn't matter whether it was a plant manager or whether it was a store-keeper. Every one of our employees was put through a commercial awareness course so they understood the issues facing the company. You've got to take people with you, and they want to understand.

**Mr O'Toole:** Good. Mrs Fisher.

**Mrs Fisher:** I have a few questions to ask. The first one I'll ask is, I'd like to come back to the decommissioning situation. I don't want to spend a lot of time on any of these because we're going to have to get some quicker answers here.

With regard to the lay-up and the decommissioning at the high-level waste long-term storage, what regulatory body approved the proposal so that the costing has been substantiated as being correct?

**Dr Jeffrey:** It was approved by the NII, by the regulator. They looked at the decommissioning plan. The government appointed an external firm of engineering consultants to look at that and an external firm of accounting consultants to look at the costing.

**Mrs Fisher:** So the costs on the energy prices today include the projection reserving for the funds required for the long-term storage?

**Dr Jeffrey:** That is correct.

**Mrs Fisher:** Based on — it almost has to be hypothesis because somebody hasn't experienced this. We're all in the same stages here of dealing with this lifetime problem of high-level waste storage.

**Dr Jeffrey:** In the UK stage 1, decommissioning has been completed in three plants and we're into stage 2 decommissioning. Experience to date has demonstrated that that work is being done within program and within budget.

**Mrs Fisher:** Coming back to the employee issue that Mr O'Toole raised, obviously there have been many reports with regard to privatization. I would suggest that my office is certainly familiar with the issue in that there has been a demonstration already, before privatization even has been decided upon or, more openly, the competition convergence issue.

Let's talk about how the employees were dealt with in the transition from public to private sector employment. I heard you respond that in fact the same employees now are in place in terms of work. The same number of employees?

**Dr Jeffrey:** No. One of the charts on page 13 showed a reduction from 8,200 to 6,300, something like that.

**Mrs Fisher:** And the safety levels, as we know by the awards you're earning now, have certainly increased, so that's a significant issue.

I come to the issue of the state of the reactors at the time you privatized. Were they under concern or direction by the regulatory bodies, that they were reaching an unsafe situation of operation?

1240

**Dr Jeffrey:** No, they were not. At no time have we operated any reactor other than truly complied with the safety case.

**Mrs Fisher:** I'm not suggesting you would. What I'm saying is that we're getting to our minimally acceptable safety standards, in terms of what the AECB has reported to us. What I'm trying to get at is that even though you made that transition, in fact your safety performance in operation and measures has improved.

**Dr Jeffrey:** I can't comment on what has been reported to you through the AECB. The normal procedure in the UK when you take a reactor out for its statutory inspection is that before you restart it, you have to submit very extensive documentation to the regulator and you apply for a consent to run for the next two years or the next three years, depending on the period. At no time, to the best of my knowledge, have we ever received anything than the two or three years we requested.

**Mrs Fisher:** One more thing on the employee thing: You mentioned that the same unions represent the same workers in almost the same work setting; it's just different ownership now.

**Dr Jeffrey:** Yes.

**Mrs Fisher:** We've heard comments before with regard to huge salary drops and benefits becoming at risk and these types of things. I'm talking about what we've heard, some of the things that have been presented in that transition here in Canada. Could you give us an idea — the number of employees changed. Did the salary rates change? Did the benefit packages change? How was it managed in terms of successor rights? Who got to go and who didn't get to go?

Then I'd like a further comment on the reaction by the employees to the gainsharing and share options that have been commented on in this book, that have been basically a merit or a reward system for high performance and a turnaround. Could you hit each of those things for me?

**Dr Jeffrey:** The reduction of the staffing levels is a very important issue. The arrangement British Energy operates is what is called SDS, selective voluntary severance. The word "voluntary" is very important because it means the individual must volunteer. The word "selective" is even more important because the company decides whether an individual who wants to go is allowed to go. There have been quite a number of instances where someone has come to me and said, "I want to go on SDS because I want to do other things," or what have you, and I have said to these individuals: "No, you can't go. You are too important to the company. You can't go."

**Mrs Fisher:** Maybe we should have used that in the 1993 strategy here.

**Dr Jeffrey:** In a number of other instances, what I've said is, "You can't go now, but I will ensure that there's someone shadowing you, someone becoming your replacement, and in about three years' time, subject to transfer of knowledge, you can go." This arrangement of selective voluntary severance is extremely important.

**Mrs Fisher:** With regard to wages, what was the impact?

**Dr Jeffrey:** The wage bargaining is precisely the same now as it always was previously, which is that each year the unions write us a letter and say, "We claim this, that and the next thing," and the management sits down with them and you negotiate something.

**Mrs Fisher:** That's the process. I'm more concerned about the dollar value impacts.

**Mr Armour:** I don't think any employee is worse off after the exercise than before. I can't think of any employee who is not better off. In addition to their existing salary and benefits, which they retained or which were enhanced through the normal negotiation procedures, they have participated in gainshare, in options and in a variety of enhanced benefits.

**Mrs Fisher:** One last question, and it has to do with the other industries, other than nuclear: You raised the point with regard to the Kyoto conference. We talked about the impact environmentally and we're as much concerned about that as anybody. I think that's one of the major reasons we went to nuclear energy to start with.

Is there any discussion right now, in your new way of doing business, of imposing a pollutant factor, a surcharge on the thermal burners, if you will, to make more fairly a level playing field for competition in the whole of the industry? If everybody agrees that there has to be a blend and a mix — where are you? You are ahead of us, obviously, in this transition, so somebody must be saying, "Level the playing field." Are the regulators saying there will be, and are they going to transition in that incremental charge, just like they did against nuclear in the surcharge for high-level waste storage costs and the decommissioning costs? Where are you in that?

**Dr Jeffrey:** You're absolutely right —

**Mrs Fisher:** Thank you. This may be the first time.

**Dr Jeffrey:** — and we'd give you 100% support in the UK.

**Mrs Johns:** Of course.

**Mrs Fisher:** Well, it's a fair question. It has to come into the balance of play.

**Dr Jeffrey:** It is a very important question. In the UK, we call it a carbon tax. As you say, it's a tax on the burners. But are we making any progress with it? I think the answer is no. It does not exist in the UK. It is something that has to emerge from a world summit. Individual countries are fearful of imposing a carbon tax within their country which could mean more expensive electricity in that country, disadvantaging the industry of that country, so it's got to be an international movement.

**Mr Armour:** There is a number of proposals for energy taxes, carbon taxes, permits for trading in emissions etc which are currently being bandied about throughout Europe. There's no agreement as yet on how to take that one forward.

**Mr Conway:** Dr Jeffrey and colleague, I want to pursue some questions, some of which have been covered before. Overall, yours is an incredible story. I was sitting here thinking you're good salespeople as well. I noticed in one of your documents that your current strategy, to read from that document, is "to expand operations in the United Kingdom and internationally in both nuclear and conventional energy sectors," and you're looking for partners. You may in fact have come to the right place, but that's not for me to say.

But this is a very impressive story you're here to tell. I want to pick up on something Mr O'Toole was asking earlier. Just in summary, looking at the period from 1989, I guess — when did the Thatcher government announce a plan to privatize all or part of the electricity sector?

**Mr Armour:** It was 1987.

**Mr Conway:** So if we look at the period from 1987 to 1997, there has been, from your recitation, a dramatic, a remarkable, a positive change, and your story is a big part of that, probably the biggest part because it was the most unlikely, people saying at the beginning that the nuclear side of energy was going to be the most problematic.

In summary, what were the key ingredients of changing the culture in British nuclear operations between 1987 and 1997 that made these numbers so favourable?

**Dr Jeffrey:** The fact that the company, although still state-owned, was operating in a competitive market and having to sell its product against private sector generators. That was the driving force which meant, "We've got to take costs out of the business and improve the business," while always being safe.

**1250**

**Mr Conway:** So competition. But when I look, for example, at some of the American utilities that are privately owned and in the nuclear business, one can think of several in New England where they had all kinds of problems that were not unlike Ontario Hydro's, for example. They were presumably operating in something of a competitive market, but there seemed to be something to the nuclear culture — we had the president of our utility stand up in the full light of day here two months ago and say that as far as he's concerned, one of the real problems is that nuclear in this province is run by a cult. Now,



others have come to say, "No, we don't share that view." Some have said it was a priesthood.

So the introduction of competition was important. It also seems to me from what you've said that your human resource development was a key as well. They not only bought in: 98%, I see in one of your documents. One of the questions I have there, by the way, is, at the present time how much of the stock is held by people who work at British Energy?

**Mr Armour:** About 3% or 4%.

**Mr Conway:** So it's clearly a minority.

**Mr Armour:** But it is very widely distributed within the employees. It is perhaps worth saying that the nuclear industry in general, because of the nature of the industry, has very high quality employees. It employs people usually with very skilled training and with a very substantial talent in running businesses and addressing them ingeniously, if you utilize and release that talent.

One of the things we have concentrated on over the last 10 years has been tapping the resource within our employees. They used to have the phrase that you entered the plant and you parked your brain at the gate. Taking that and turning it around so that we took our employees with us has been a major exercise.

We talked about the gainshare program that was motivating improved performance. That program was designed by our employees and then sold by those employees who designed them to their colleagues. They brought it to us and they deserve the credit for it.

**Mr Conway:** And much of your operation is unionized.

**Mr Armour:** Virtually all of it.

**Mr Conway:** A number of people have come to the committee, certainly a number of outside analysts have pointed over time to the very difficult labour-management situation at Ontario Hydro. I think it's fair to say that a number of people, including the most recent outside analysts, have said that the collective bargaining process at Ontario Hydro Nuclear is part of the problem. In your experience I take it that it's not so much the fact that it's a unionized labour force as much as the participation, the involvement, the ownership of the labour force in the operation.

**Dr Jeffrey:** That's the key thing because the people who are employed in these plants believe in nuclear power and they want nuclear power to succeed and they know they've got to be commercial. The union officials want to deliver a successful industry as well.

**Mr Conway:** You may have answered this and I may have missed it, but do your unionized employees have the right to strike?

**Dr Jeffrey:** Theoretically, yes. They never have.

**Mr Conway:** They never have. Why don't they strike?

**Mr Armour:** They did in fact back in the early 1970s. They don't strike because we get on with them.

**Mr Conway:** But theoretically they do have the right to strike.

**Mr Armour:** Yes.

**Mr Conway:** But the strike issue is not an issue because there is a good, cooperative environment, I take it, between labour and management; obviously, you've said that.

**Mr Armour:** Yes.

**Mr Conway:** I still have a problem with the way it was set up because it appears to me — I wrote down "Magnovox the dog." It appeared to me, from what you were telling me, the way this thing was set up it was that anything that was kind of good and viable was assigned to British Energy and Magnovox got —

**The Chair:** Magnox.

**Mr Conway:** Have I got it wrong? Magnox got what was left over. I just want to be clear how Magnovox operates with that portfolio.

**The Chair:** It's Magnox.

**Mr Conway:** Magnox, I'm sorry.

**The Chair:** They may not want us to give the wrong information.

**Mr Conway:** Thank you very much, Mr Chairman.

**Dr Jeffrey:** "Magnox the dog," I like it. What you can see happening in the UK is progressive privatization, starting with the easy bits. So what was done in 1990 was to sell off non-nuclear. What was done in 1996 was to sell off the modern nuclear.

Another twist to the story is Magnox stayed in state ownership but the government decided that Magnox should be transferred into BNFL, which is a state-owned company. That's the front-end and back-end fuel company. There are already stories within the UK that BNFL itself now wishes to be privatized. So you just move incrementally.

**Mr Conway:** Listening to your presentation, one of the impressions I had is that incrementalism was an important policy for the successful privatization. Would that be a fair observation?

**Dr Jeffrey:** As in all aspects of life, you do the straightforward things first and the more difficult ones later.

**Mr Conway:** I don't disagree with you, but there are some revolutionaries abroad in the land, the lady is not for turning, poll tax or —

**Mr Armour:** Could I just clarify this impression given that we took all the liabilities and dumped them at Magnox? That was not the case. Under the companies act Magnox has its separate board. There was no legislative framework of allocating liabilities or assets. This was done by negotiation between two companies so that in selling Magnox — it used closed reactors from Scottish Nuclear — we had to get an independent evaluation, which is why I referred to the difficulty of pinning down the merchant bankers.

We then had to negotiate with them so that they, as companies act directors, would not be liable for buying or taking this liability without getting due recompense. The transaction was all done at arm's length through an arm's-length negotiation and we paid them very substantial sums to take that reactor off us. As a result, Magnox was set up

so that it was confident it would meet the tests of solvency.

**Mr Conway:** But we've just had our national Auditor-General tell the people of Canada that in a recent privatization — in this case, our national air transport system. He has done an independent evaluation and he believes Her Majesty's Canadian government sold it off for about \$1 billion less than it was really worth. That's just been in our news in the last 10 days.

One of the real concerns here, regardless of where you stand on privatization, is getting the best value for the taxpayer who has paid for this. When I look at this, and again you people are here and you've done a very good job and it's quite a story, I suspect we're not getting the whole story, and I don't mean that as critically as it must sound. I'm always concerned, and when I see the Magnox story I think: "Was this a careful way of dealing with a lot of dog assets, stranded assets? Just pile them up over here? Yes, British Energy and a lot of these other people, we've got to prepare them for this new world and they've got to be able to stand and compete and run, but none the less, we've set aside some not very attractive assets."

**Dr Jeffrey:** The answer to your question, and both Robert and I have said it again and again, is no. All the costs and liabilities and debts properly associated with Magnox and audited to be associated with Magnox and scrutinized by the UK parliamentary select committee were put into Magnox, and all the debts and costs and liabilities and everything else associated with British Energy were put into British Energy.

**The Chair:** Dr Jeffrey, thank you very much for attending upon this committee. I particularly appreciate the timeliness of your presentation. I would hope that you would be prepared to respond to another invitation to be with us, if that is possible, before this committee completes its duties.

Yes, Mrs Johns?

**Mrs Johns:** As a point of order, Mr Chair, I was wondering if the committee could ask for British Energy or someone to get the opening financial statements, as of the day of the transfer, for both Magnox and British Energy.

**Interjection:** There you go.

**Mrs Johns:** I don't think it has the opening financial or maybe it does.

**The Chair:** I think your request is reasonable and obviously it's been responded to. That shows you the speed with which the Chair responds to the requests of any member of this committee.

Dr Jeffrey, again I thank you both for being present. It has been very helpful indeed. There will undoubtedly be a number of follow-up questions that will come to you at least in writing, and we may engage in teleconferencing if not have you here directly as well before the end of the committee. I appreciate your time.

**Dr Jeffrey:** We will provide the information you wish.

**The Chair:** I thank you so much. I remind the committee, we will adjourn and meet again at 1400 hours. That's 2 pm for Mr Conway and his colleague.

**Mr Conway:** Will there be any heat this afternoon?

**The Chair:** That is being dealt with right now. The committee will now stand adjourned until 2 pm.

*The committee recessed from 1300 to 1405.*

**The Chair:** The committee will be in order, please. We resume the hearings. Witnesses this afternoon include Dr Kenneth Hare, and then there will be the Association of Major Power Consumers in Ontario. One hour has been scheduled for Dr Hare.

## KENNETH HARE

**The Chair:** Dr Hare, I'd like to welcome you to these hearings. I would appreciate it if for the purpose of Hansard you would identify yourself, and then we are in your hands. If you'd care to make your opening statement, then we'll proceed with questioning, rotating by caucus.

**Dr Kenneth Hare:** Thank you for the opportunity of addressing this committee, whose work I think is extremely important. I'll introduce myself in a moment. I just want to make it clear that I have distributed a document, Notes for Testimony, which includes the essential biographical material, for members of the committee. Mr Campbell has copies of it.

I am Kenneth Hare, of Oakville, Ontario. I have been involved in the science policy area in most aspects of environmental questions. I was the first director-general of research in the federal Department of the Environment. I stepped out of that particular frying pan into the fire of the nuclear industry in 1977, when I became chairman of the federal inquiry into high-level nuclear waste disposal, whose report has been acted upon by Ontario Hydro, the province of Ontario and the government of Canada and has led to the federally sponsored waste disposal program that is now being spread out before their own assessment program.

That was my first real meeting with Ontario Hydro, because Ontario Hydro did a lot of the preparatory work for that. They are sometimes accused of not having looked at the waste disposal issue in time, and I think that was probably true of the corporation as a whole, but it wasn't true of the people who worked hard on documentation for my inquiry. I'd like to make it clear that we relied heavily upon them. They do a good job.

When Chernobyl happened, I thought by that time I'd finished with the nuclear industry — I'm not a nuclear engineer and have no special interest in the nuclear industry — but that was not the case. In 1986, when Chernobyl happened, the government of Ontario asked me if I would become commissioner of the Ontario Nuclear Safety Review with the responsibility of answering questions such as: Could Chernobyl happen here in Ontario? Are the reactors of our provincial utility being operated safely?

This was a very large-scale investigation. Although I was the only commissioner and was solely responsible for the output, the input was enormous. It came from a large group of consultants, it came from a lot of public interest groups that intervened and it came from a team of specialists appointed by the Royal Society of Canada. I think you



have seen the report on the safety of reactors. What you may not know is that I have updated that report in two documents, one through 1991 but dated 1993, and another one that brings events up into 1993. This, in other words, has been a continuing responsibility for me.

In fact, I carried it on with enthusiasm until 1994, when I had a heart attack. I'm not saying the affairs of Ontario Hydro were responsible, but I had a heart attack and I've slacked off quite a lot since then. I'm still a member of the technical advisory panel which this group recommended be appointed, but I'm not particularly active in the area at the present time.

I'd like to say that I have read a little bit in the press of what has been said to this committee already. I didn't hear anything that I wanted to dissent from very strongly, but their reports were not complete. I can't endorse everything that I didn't in fact hear, but read about. All I can say is that I'm starting on the assumption that you already heard from the big guns in Ontario Hydro and some of their critics.

I'd like to step back myself for one moment to the main conclusion of the ONSR report. I recommended in that report that Ontario Hydro ensure that at an early date its operational organization be thoroughly re-examined in close cooperation with independent consultants who have international management experience; second, that they commission a study of factors affecting human performance throughout the utility for the purpose of achieving optimum efficiency and the maintenance of high standards of safe operation; and third, that they examine and revise their arrangements for establishing and maintaining an overall quality assurance program for each of the plants after taking advice from independent specialist consultants.

The question of safety in the nuclear industry is usually discussed in the context of the safety of the technology itself, the hardware. After years of study, I came to the conclusion that the principal hazard to public safety, if there is one, is the malfunctioning of the operational system, all the way from the management of the enterprise at the board level down to the humblest starting apprentice in the stations. We found a great many examples of cases where really an excellently conceived program was being second-guessed by people who thought they knew better. We constantly encountered people who, with the best of intentions, had departed from agreed procedure. It was that which led us to conclude in the 1987 report the recommendation that I just read.

May I say in conclusion that it seems to me that Ontario Hydro tried to respond to this. They immediately set up a contract with an American consulting company — this was back in 1988 — which reported on issues of safety and operational conditions. They carried out a corporate support evaluation for the program some years later. Perhaps you have seen that; if you haven't, you certainly should. Finally, they turned, and I have to say in desperation, to this team of American external appointees who have just taken over the administration of Ontario

Hydro Nuclear as vice-presidents of the central operation and also of the stations themselves.

It's taken a long time, but I feel I ought to say that I do support the actions that have been taken to go outside. I'd like to explain why.

It seems to me that Ontario Hydro has suffered enormously from early miscalculations of what they ought to be achieving in this area. When I first saw Ontario Hydro at work in 1977 in the waste disposal context, the first reactors had already been in operation for some time; others were under construction. The whole enterprise was seen almost as a crusade, a crusade to put the central base load supply of the province of Ontario on to the nuclear base. An enormous amount of energy, enthusiasm and good intentions was put into that effort.

The next time I looked at them, of course, was after the failure of the pressure tubes in Pickering in 1983. This really began the process of what some people inside the corporation itself have called a "retreat from glory" into the pessimism of the present time. It seems to me that the biggest impression I've been left with is one of amazement that such an enormously self-confident start could end up in the kind of trouble they found themselves in a few years ago.

It would be a mistake to say that the confusion started in 1993. It wasn't simply Mr Strong's reorganization of 1993 that led to it; it was the growing realization, first, that the hardware was fallible — that is to say, the reactors were capable of faults that derived from original design defects — and secondly, that the operating system that had been set up was also highly fallible in that it occasionally led to failures which could only be attributed to human error.

The whole point about a safe operating system is not that it eliminates human error, which you can't eliminate, but guards against it. It has guarded against it. There has been no actual, as far as I can judge, minus sign in the balance sheet of the population of Ontario on health and safety grounds.

On the other hand, on economic grounds, the burden of repair that has followed the various failures that have taken place has been enormous and has brought the corporation, as you know, into the economic situation in which it finds itself today.

That retreat from glory, which was a phrase I heard at a meeting of one of the board's committees, was itself brought about by the realization that this very large organization could not bring about an effective system of internal reform. It wasn't possible for them to grab hold, or they didn't succeed in grabbing hold, of what was wrong with the organization, even though almost everybody inside Ontario Hydro Nuclear could have told you what was wrong. That is true of large organizations everywhere, which is why I say that I think they had no recourse but to do what they did, to go to outside consultants.

The outside consultants have reported. You've undoubtedly seen their enormous report and heard from their leader. They were being paid to be as harsh as possible

and to be as drastic and as radical as possible with a view to bringing the reactors back into service. I realize that this, for this committee, presents the catch-22 situation of whether it is worth the cost of doing that, because it will be an expensive operation. My own view is that one doesn't have much choice. There is a limit to the amount of stranded hardware that you can leave lying around the province of Ontario and pick up the bills afterwards. But that is obviously for you to decide and not me.

May I close by saying that every time I see Ontario Hydro attacked in the press or on the floor of the Legislature or anywhere, I'm compelled to say that in the years that I have dealt with this corporation, I have had nothing but the best of relations with the staff, including everybody from the chairman right down to the shop floor. I've been impressed, as all my colleagues have, by the immense reservoir of ability there is inside the utility. But equally I've been depressed by the inability which that ability has to harness itself and bring about the result we all look for.

That's all I wanted to say to start with.

**The Chair:** Thank you very much for your presentation. I appreciate and welcome it. We will now begin questioning by rotation.

**Ms Marilyn Churley (Riverdale):** Thank you very much for appearing before us today. I appreciate the fact that you remember my days at city hall and, although most people have forgotten now, the fact that I started at the energy efficiency office at city hall. I guess that tells you where I'm coming from in this question I'm going to start off by asking you about the recovery plan, which you have stated that you support, and you don't see at this point any choices in where we go.

I'm concerned that the recovery plan doesn't involve any strategies to reduce the amount of coal being used as replacement power through things like conservation, fuel switching and renewable energy.

1420

What kind of plan do you think Hydro could put in place? I expect you're going to say, as everybody does, that in the short term the amount of power that's going to be lost for a while cannot be replaced quickly by those alternatives, but I'm quite concerned that this hasn't been looked at. Our government, as you know, started on a very small scale the beginnings of doing more serious work around these areas, but for the most part those programs are not operating any more. I'm just wondering what you think about a recovery plan that doesn't include any of those options.

**Dr Hare:** Well, I didn't actually say that I approved of the plan. I said I approved of the tactic of bringing in external consultants who are not subject to the clan loyalties that affect people from inside the organization. You'd be amazed how loyal the staff are to one another and the inability they have of being rude to one another. You have to be very rude indeed in this situation to make any sense. They went out and asked people who were not bound by those ties, so specifically what I've approved of

in my remarks is this decision to make an external job out of it.

I agree with you that a weakness in the action taken by the board of directors, as I understand it — I was not there and I only know what I've read in the press about it — is that there is not an explicit suggestion of where we go from here. If you shut down 5,000 megawatts of power, you're certainly going to have to replace it quickly. I understand that Energy Probe came and testified to you that they were worried about what would happen this winter. Well, so am I. The margin of safety that we have had in terms of the security of supply has obviously been eroded and will be eroded still further if we are forced, as we are being forced, to shut down these reactors.

As regards replacement sources, I also regret the fact that our various governments have tended to retreat from the systematic study of alternatives. Having said that, I have to point out that we are, by our lifestyles, committed to very high energy density consumption. We consume an awful lot of engineered energy per square kilometre, as well as per head, and we'll have to use an awful lot of solar, an awful lot of biomass, an awful lot of any alternative to make good what is now being lifted out of production. I assume that a considerable amount of the loss will have to be made up from purchases from our neighbours, some of which will be nuclear, paradoxically.

But I agree with you that it would be desirable that the governments of Canada — I put them in the plural because there are at least four provincial jurisdictions that should be in this game in depth — should look again at the question of alternatives in supply.

**Ms Churley:** I understand that you had looked at and studied Hydro in the early 1990s, was it?

**Dr Hare:** It was on and off.

**Ms Churley:** It was on and off.

**Dr Hare:** It's on the page there. The basic study, the big, fat volume here, the work was done in 1986 and 1987, 10 years ago. These two were done in the years between 1988 and 1993.

**Ms Churley:** Many people, including Maurice Strong and others who have been involved with Hydro for years, have said that the problems with the nuclear system have been long-standing. I know you alluded to this a bit, but I'm wondering what you found in your last study or any of those studies. Would you agree that these problems were long-standing, and had you identified some of them?

**Dr Hare:** Yes, they are of long standing and yes, I did identify some of them, but I didn't identify them strongly enough. Furthermore, the decay period was largely in the volume that was never published.

**Ms Churley:** So you did identify some of the problems that were outlined at the press conference, and the recovery plan was announced almost immediately afterwards. Were you surprised at all or had you known that most, if not all, of those problems had existed for some time?

**Dr Hare:** I knew that they existed. I have known for a long time that they existed, and so has everybody else at Ontario Hydro. I'm not a member of Hydro's staff but I talk to Hydro people a lot and I know perfectly well that



they were aware of their own deficiencies and they were pessimistic about future developments. There's no question about it.

**Ms Churley:** Do you think there is a nuclear cult? That's the word, that's how it was described, and it's talked about a lot. Is it, do you think, because there is a cult that the information didn't really get acted upon, that governments weren't aware particularly about what was going on?

**Dr Hare:** I don't really think so. That was Bill Farlinger's term, and he sometimes goes in for colourful language. I don't think so. There's not a cult, but there was a sense of high mission back in the 1970s and early 1980s. This was a crusade being carried out by people who really believed in what they were doing. There was a major national objective and Ontario was going to lead the world.

That is completely dead and gone. The people who engineered that have virtually all retired and the attitude of the last few years inside the staff of Ontario Hydro I would say has been fundamentally apprehensive and pessimistic. That doesn't mean to say that they have actually turned against the belief in the technology. On the contrary, most of the nuclear engineers will still tell you, as indeed I would say, it's perfectly feasible if you can work out an adequate operating system. It isn't the reactors, it's the people that run them, and that view has been accepted through a very large part of Ontario Hydro.

The evidence that has been presented to you, which may have come as a shock to some members, would not have come as a shock to anybody who had ever set foot in 700 University Avenue, which is a wasteland. Half of 700 University Avenue is empty because of the gutting of the central administration of Ontario Hydro.

**Ms Churley:** I haven't been at all the committee hearings, but when I have been here I have noticed a difference in opinion as to whether part of the problem, particularly over the last several years, is because, as Mr Farlinger — we were led to believe on the day of the press announcement about this that it was a management problem, again because of the cult existing there.

We've had discussions as well, of course, that when the NDP was in government there was, as you know, some downsizing, bringing Hydro under control, trying to freeze rates, all of those things that I think all governments are preoccupied with in terms of Hydro rates.

There are some who say, and I'm not clear on what it really is, that it's a management problem. There are others who are saying that because some of the experts, some of the manpower that was needed, were let go, that may have contributed to the problem. What do you think?

**Dr Hare:** Certainly the corporation appears to me to have lost a great deal of ability over the downsizing process, because one of the consequences of assisted downsizing is that the able people leave and get jobs somewhere else. There was certainly an exodus of talent in the years following the reorganization in 1993 that the way in which the process was undertaken tended to encourage rather than discourage.

On the other hand, I have to say in defence of the nuclear business that it seemed to me they did make a very honest attempt and a largely successful attempt to protect the safety function in the stations. As a member of the safety review, I don't remember feeling that some program was being starved of people and resources because of the downsizing. What I felt was that the downsizing had affected primarily the headquarters of the corporation, and I wasn't joking when I said that 700 University Avenue is a ghostly, eerie sort of place in the evening nowadays. You go in there and half the floors seem to me to be half empty.

**1430**

What happened in the years immediately after 1990, when it really began to sink in that there was a lot wrong in the nuclear division, is that the new head of OHN proceeded then to adopt the policy, with the obvious concurrence of the board and probably the majority of his colleagues, of moving functions out to the stations. The stations actually received people from headquarters; they received functions from headquarters.

One of the consequences of this was that there tended to be differences of standard between the stations in performance and in the emphasis they laid on various aspects of the performance business, in the language they used to describe safety measures. They tended to differ as between stations following this decentralization movement, and that's one of the things I can't stomach. I believe safety standards should be identical throughout the corporation and that no measures should be taken to decentralize if decentralization means you lose control over the most important consideration of all, which is safety.

**Mr Galt:** Thank you, Dr Hare, for coming this afternoon and bringing us some interesting information. Responding a little bit, it hasn't been just the last chair of the board who has brought out some rather interesting comments. Certainly Mr Strong, when he went on the board, described it as a crisis at Ontario Hydro. More recently, he referred to it as a nuclear culture.

There's no question, as we look at it over the last few years, that we're seeing efficiencies of the reactors being pulled back, as I understand, for safety reasons. It's perfectly safe if you use them less and therefore reduce your efficiency.

I was a little late coming in. My apologies; I may have missed some of the things I'll be asking about. One relates to the organization you were chair of, the Ontario Nuclear Safety Review. I'd like to understand that a little better and get clarification from you to give some assurance to the people of Ontario that the operation of our nuclear plants is indeed safe.

**Dr Hare:** Do you want to pose a specific question or do you want me to make a general statement?

**Mr Galt:** Just safety in general. I'd like you to spend a minute or two on that, and the organization you were chair of: where it came from, what its teeth are.

**Dr Hare:** I was chairman of the Ontario Nuclear Safety Review from the beginning of 1987 until I reported

to Bob Wong somewhere in the spring of 1988. The organization was established in the wake of Chernobyl. What happened was that the Liberal government at the time was confronted with whether to allow the completion of the remaining two units at the Darlington nuclear generating station. They had been started but they hadn't gone beyond the point of no return. The question that arose was, could a Chernobyl-type accident affect the kind of reactors we have?

The Premier and his Minister of Natural Resources, I believe it was, approached me and asked if I would undertake the job of organizing an internationally based study of the Ontario reactors to see whether they were safe or not. I said I would, and it took a year and three months to do it. I was given the funds, a very large amount of money indeed by my standards, \$1.7 million, to hire the best we could find anywhere in the world to make comparative studies of our reactors versus the alternatives. This big, fat report was the result, plus five other volumes of the same size, I'm sorry to say, which are the consultants' reports.

What we found then was that first of all we could trace no impact on the population near the stations from the persistent release of radioactive materials. It was strongly represented to us that such leakage did take place and that there was therefore a threat to the people around the stations. We investigated that as best we could, in collaboration with the Atomic Energy Control Board, the federal regulator. We pressed for the creation of studies of the incidence of leukaemia and Down syndrome around the nuclear stations, and they were carried out. We also pressed for an independent review of the mechanical side of the safety question from the International Atomic Energy Agency in Vienna, their OSART team. That's in here. It was published. In a nutshell, at that time they seemed safe, if by safe you mean acceptably low-risk, because there's never zero risk.

**Mr Galt:** We're being confronted in the recovery plan that they're going to take down both A plants, at both Pickering and Bruce. Are they that unsafe? Do both need to come down now? Could one stay up for a while while the other one is being retrofitted? Could there be a sequence in retrofitting, in your opinion, and still be safe?

**Dr Hare:** Probably not. I think it's going to be a question of doing what the American consultants have suggested. I say that because the problems at Bruce have been going on for years now; they're not new. They arise from the failings of the older reactors in Bruce A, particularly the steam generators, which are one of the most intractable jobs of rehabilitation you can imagine, some thousands of pipes through large vessels, and you have to get inside every one of those pipes and somehow clean them out. Although every attempt was made, in the years I was interested in this, the early 1990s, to do this without closing the entire station down, each one led to renewed trouble in another of the Bruce reactors. I'm not saying there was any cause-and-effect consequence; it was just that the design of those reactors and the boilers which they support, which are enormous, was such that it was a

question of whether it was worth operating at 50% capacity or less, which was what they were going to do.

**Mr Galt:** Are you surprised they've deteriorated as fast as they have?

**Dr Hare:** Yes, I am, very surprised.

**Mr Galt:** So you're disappointed in that.

**Dr Hare:** Extremely disappointed. I bought the argument that this was a very superior design.

**Mr Galt:** We're hearing that they have not been properly serviced, as a nuclear reactor management problem. Does that fit in with your thinking?

**Dr Hare:** A principal finding of this big, fat volume is that there was inadequate attention and resources devoted to the maintenance function.

**Mr Galt:** So now the taxpayer is going to have to pay for that level of mismanagement and that lack of service to those reactors.

**Dr Hare:** I'm tempted to say that that's not peculiar to the nuclear industry, but I agree with you. We're all going to have to pay for the mistakes of the past. It's not error, you see; it's not deliberate, malicious error that's involved. It's mistakes.

**Mr Galt:** Sure. I was intrigued by your use of the phrase "retreat from glory." I've certainly run into other organizations where they've won an award or they were one of the best at the time and they kept patting themselves on their back until they couldn't reach it any further and almost broke their arm doing it while they went downhill. They weren't looking out to see what else was happening in the world. They either stayed at the same level or deteriorated. I'm kind of getting the feeling that maybe that's what was happening here. We developed the Candu reactor, we were the best in the world once upon a time, and we rested on those laurels. Along those lines, do you see that that may have been what happened to our industry?

**Dr Hare:** Yes, to some extent, but it's not entirely fair to the industry. They were already aware back in the late 1980s that these problems were coming to the surface. They could have pressed harder for the maintenance functions; they could have pressed harder for immediate attention to difficulties that turned out to be chronic. I suppose they were perhaps more optimistic than was justified, because they were the people who built them in the first place. It's very hard to say that the machine you built is not working right.

**Mr Galt:** Listening this morning to the British experience — I don't if you were able to listen in.

**Dr Hare:** No, I didn't, but I know the gentlemen concerned.

**Mr Galt:** Everything has just totally turned around there: efficiency, people working at the units, the cost of electricity going down, the private sector taking it over. I even got the feeling that with improved safety, certainly in many areas they had figures to show it. I still have concern about nuclear safety. The people of Ontario have been concerned, from what I've heard, that if it's transferred to the private sector, safety would go downhill. That's certainly not what I heard this morning from the British



experience. Do you have any feelings, if we move from monopoly to competition to privatization — one of those steps — about what happens with safety as we go?

1440

**Dr Hare:** I think it's perfectly possible to maintain high safety standards with private ownership, provided that you have strong central regulation, as the Americans do, as the French do, although the French have a nationalized service. Their regulator is strong and technically competent.

I think you have to dissociate or detach the controversies concerning private ownership versus public ownership from the functional question of how you maintain safety. Safety is something that requires, first of all, attitude on the part of the workforce, and morale is therefore absolutely crucial. If you privatize and as a result of privatization you lead to low morale in the staff, then that's a big minus. If, on the other hand, you turn around to the staff and say, "You'll be better off under private ownership. There won't be any cap on your negotiations. The unions can press hard against a small supplier" and so on, that's a different ball game. In the United Kingdom, they have in fact, I think, achieved a lot of that. On the other hand, the Americans have achieved a great deal of it — not a lot but most of it — and they've done it by sheer hard, gutsy work. These fellows — fellows and one girl — lady. I'm sorry, woman.

**Mr Galt:** Woman.

**Dr Hare:** Yes, it's sort of hard to know what to say.

*Interjection.*

**Mr Galt:** And it's all in Hansard.

**Dr Hare:** I'm glad it's in Hansard because it'll teach future witnesses to guard their tongues.

But the point is that these fellows and girls who have come to work for us —

**Ms Churley:** Well, now you're in it.

**Dr Hare:** — have all been through this particular hoop. They're all people who have taken part in rehabilitation exercises on the US side and on the US side they have taken government-owned enterprises, like the Tennessee Valley reactors, and pulled them back again, and I think that it can be done here.

**Mr Galt:** It's interesting, your comments about people. We're really hearing it's a people problem, not a mechanical gizmo problem. That's certainly the message in the IIPA report and, as you're mentioning, if you're looking at bringing competition into Ontario Hydro or taking it the next step to privatization, it's very much people-related and maintaining that morale within there.

I'm curious to know — we're talking about restructuring. We've had the Macdonald commission come in with the report, one that the government has been wrestling with and coming out with a white paper. Do you see this direction that the government should be taking on restructuring? Do you have any feelings in that area?

**Dr Hare:** The privatization of the provincial industry?

**Mr Galt:** They were talking about competition. That was more the buzzword being used in that report.

**Ms Churley:** "Buzzword" is right.

**Dr Hare:** I've no special standing in this. I'm a pure pragmatist in matters of this kind. I don't think there is a uniquely right way of organizing an energy system. I think there are some uniquely wrong ways of doing it but not uniquely right ways of doing it.

I know Donald Macdonald very well. I know how he thinks, and I don't dissent from the things he says in general. However, if you think that simply by introducing competition into the market here you will get rid of these problems automatically, you will have to wait 20 years and there aren't 20 years available. In other words, if you're going to salvage these reactors and not add to the great load of stranded assets, action has to be taken now.

**Mr Galt:** Put another way, if we'd gone to competition in the late 1980s would that have improved it?

**The Chair:** Mr Galt, I know it's always frustrating when you're almost there with another question, but I have to get a little tougher on this.

**Mr Kwinter:** Dr Hare, we heard from British Energy that their mandate is to make sure that safety in the nuclear industry is number one. We keep hearing that here, but you suggest that somehow or other there isn't a safety culture. You were asked by the then government in 1986 to take a look at the Ontario nuclear review, and in your report I was interested to see that you said, "The most serious technical safety-related issue in Ontario Hydro's reactors is the poor performance of the pressure tubes." Although your report was in 1988, I guess it was 1986 and 1987 in which you did your investigation.

**Dr Hare:** Yes.

**Mr Kwinter:** You also stated that, "Present annual expenditures of \$42 million for research and development on the pressure tube problem appear small in relation to the problem and to Ontario Hydro's revenues of \$2.5 billion for nuclear power sales alone." The question I'd like to ask you, in your investigation were you satisfied that the basic design of the reactors, if they were properly maintained, was adequate? In other words, was it a design flaw or was it a combination of design flaw and poor maintenance?

**Dr Hare:** There were design flaws. No question about it. The principle behind the design is, I think, sound enough. You can argue that the Candu reactor is too complex. I hired expensive consultants to answer the question, "How do our reactors shape up alongside the light water reactors in terms of safety?" I got an almost 50-50 assessment that there was no great advantage to the Candu technology but no deficit either.

**Mr Conway:** You had good consultants.

**Dr Hare:** I think we had good consultants.

**Mr Conway:** They were 50-50 in the end.

**Dr Hare:** Yes. That's what consultants were about.

**The Chair:** We'll do the question one by one, Mr Conway.

**Dr Hare:** The defects are those of a first-generation technology. There's probably no case in history in which we have invested all these tens of billions of dollars in a new and untried technology, and that is what has happened here. Ontario Hydro's reactors are the first-generation

application on a monumentally large scale of a technology that had only been developed in research reactors up till that time and mistakes were made that became apparently only in use. The same thing happened at the beginning of the railway age. Boilers burst and so on. But we jumped in with both feet and got going on the very large scale before that had been done.

The pressure tube issue I headlined because it's a classic case in point. Nobody had ever, to my knowledge, made extensive use of zirconium alloys before. It is essential to the Candu principle that zirconium alloys be used because zirconium is the only metal of adequate strength that has the required properties that allow the neutrons to fly around and so on. But the question is, which alloy, and we picked the wrong alloy. In the first instance, this country adopted an alloy that turned out to be capable of deformation and blistering under stress and the failures at Pickering were the direct result of this, not of human error but of the initial error in picking the wrong alloy. That has been corrected at enormous cost, but it has been corrected.

So it isn't just a question of management. It's much more now management because most of these technical glitches have been removed by research and experience and development. I believe that answers your question.

**Mr Kwinter:** Yes. Actually you answered my next question because it would seem to me that Ontario Hydro has always prided itself on its technical capability, its ability to build, and if this problem was identified and you now say that it has been corrected, we no longer have the problem of the design deficiency. It's a matter of maintenance and it's a matter of having the corporate culture to be conscious of this particular problem. The question I want to ask is that if the same attention had been given to replacing the design defects and also accompanying it with the maintenance awareness and the safety awareness, would we be in the problem that we're in now?

**Dr Hare:** I think the answer is that we would not be in the problem. If we had given adequate attention — by "we" I mean the people of Ontario; I'm not talking about anybody or any level within the corporation. We allowed our provincial utility to put undue stress on the technical aspect of this question and not enough stress on the managerial question. It's one heck of a job to run a corporation like this. It's one heck of a job to run a single reactor.

You take those big reactors, they contain 480 pressure tubes. Every one of those 480 pressure tubes is refuelled from time to time. Every one of them has to be inspected. Every one of them has to be monitored. Each one connects up with a macaroni pie of feeder tubes, some of which have been showing signs of corrosion in recent years. That is quite an enormous job, but it nevertheless has been undertaken, as you suggested. It has been undertaken, unfortunately, at a level of cost and with a degree of thoroughness which has, in the opinion of many of my own personal advisers, gone overboard a bit.

#### 1450

I take it the committee's aware of the power deratings at Bruce. They were undertaken because of a hypothetical calculation that there might be a shifting of the fuel within the tubes. No such shifting has ever been observed. It lost the corporation 30% of the productive capacity of all those reactors for a period of about two years simply to make that hypothesis. That hasn't been corrected because it's an untested hypothesis. The pressure tube thing has been corrected at a cost, which is part of the reason why the corporation's finances look so difficult.

**Mr Kwinter:** Dr Hare, you stated that you had a lot of confidence in the individuals at Hydro, but collectively they don't seem to have the ability to manage the facility safely and properly. Is that a fair evaluation?

**Dr Hare:** They have not had in the past. I have a good deal of confidence in the present administration, the top end of the corporation.

**Mr Kwinter:** Do you have a lot of confidence that they have the ability to implement the recommendations made by Mr Andognini?

**Dr Hare:** I don't think they have the ability, sir, I think they have the guts to do it.

**Mrs Johns:** Thank you, Dr Hare.

**Mr Kwinter:** What would you suggest that they do? I think it takes a little bit more than guts. I think there has to be that ability.

**Dr Hare:** The ability is there. The question is, how do you identify it and — I hate to use a word that sounds a bit outdated now — empower the ability? I never came across more underemployment than I've seen in Ontario Hydro, say, five to 10 years ago. It's no longer the case but it certainly was. By underemployment I mean not that people were fiddling their hands with nothing to do, but that they were wasting their time doing things that didn't need to be done — committees, task forces. You wouldn't believe it.

When I was director-general of research in Environment Canada I discovered that my colleagues were represented on over 403 departmental conferences and discussions required by Treasury Board rules. Since there were only 1,200 of them altogether, that meant that 50% of the effort was going into talking in rooms like this. Now I'm not saying you're wasting the public's time or that I am. But when you take highly trained engineers and you give them nothing to do but just talk to one another from one end of the week to the other, that's a waste of effort. Certainly that used to be the case, but it's gone. If anything now, there is a staff shortage on the reactors. Several of the stations' people seem to me to be dangerously overworked.

**Mr Kwinter:** I just want to clarify. You're saying that problem is gone; it isn't gone because there has been a shift in attitude, it's because there has been a depletion of people.

**Dr Hare:** There has been a depletion of people and there is still probably some misallocation of resources. It's not easy when you're dealing with organized labour and with the society, who have both appeared before you. You have to wait for contracts to run out. You have to



negotiate a contract which changes the rules of the game. I respect that, but it is a slow process and you have to adapt very quickly in this game.

**The Chair:** There is time for one question per caucus.

**Mrs Fisher:** Since we're doing one here, I would focus on this question. There seems to be concern with regard to how and who in fact should be responsible for the regulation of continued safe operation, how that meshes together between the regulatory and the licensing bodies. Your area of expertise is that of safety, so I would ask this, then, in a two-part question.

For the continued operation and licensing, there seems to be a disassociation between the Ontario Energy Board process, which, yes, primarily looks at rates but looks at other things and this morning voiced opinion with regard to safety, and the Atomic Energy Control Board, whose responsibility it is to license but seems to be somewhat separated from approval input, not just input or recognition of a good plan for safe operation that's presented by the management board of Ontario Hydro.

Is it time that regulation, I guess in the true sense of the word, was enforced in the operating status of the plants so that the AECB also carried some responsibility for agreeing that the four repair or recovery plans that were placed before it in the past 10 years in fact weren't going to meet it or cut the requirements that would allow for continued safe operation?

The AECB seems to be the body —

**The Chair:** Mrs Fisher, please, if you could just get to the question. We only have enough time for one each and I have less than five minutes.

**Mrs Fisher:** The AECB seems to be a body removed and yet it has full legislative power per se in terms of licence. Should there be some approval process in that so that when they also say it will work, it works?

**Dr Hare:** That's a very long question, a very difficult question to answer. I certainly think the role of the Atomic Energy Control Board is often negative. It's negative in the sense that it takes them a long time sometimes to respond to the examination of things, whereas the American Nuclear Regulatory Commission interacts extensively. On the other hand, the American NRC dictates to the utilities how they will solve a problem. We don't do that.

**Mrs Fisher:** That's exactly the question I'm asking.

**Dr Hare:** The present AECB does not have the staff to undertake the job that is required here. On the other hand, I would very much like to see some softening of the relationship between the control board and Ontario Hydro, other utilities generally, because the same is true of Quebec and New Brunswick.

**Mr Conway:** Dr Hare, I have in my hand the 1996 annual report of the technical advisory panel on nuclear safety at Ontario Hydro. You're a member of that panel — it's chaired by a former president of the AECB, Jon Jennekens — a very distinguished group of people. In that report for 1996, which was, I gather, presented in early 1997 — let me just quote some of the report.

It is your panel's view that the unacceptably poor performance of the eight Candu units at Pickering during 1996 are not the result of short-term causes but rather a series of cumulative effects. You highlight five: a lack of corporate understanding, inefficient and ineffective corporate management processes, latent effects of the dislocation and disruption of personnel both at work and at home resulting from the 1993 reorganization and downsizing, and on you go.

That went up from a pretty impressive panel to the top brass, and I gather not for the first time. I just picked one document. I'm very encouraged, as is Ms Johns, to hear you say, boy, you're confident now because you sense that the new team seems to have the guts. Well, this is some of the new team that was getting this advice. Is it the Andognini crowd that really impresses you as having the guts to go in there now and really —

**Dr Hare:** No, it's Bill Farlinger, the chairman, and his senior officers.

**Mr Conway:** The question I guess I have to ask is, this stuff was being — I see some of the government members are chuckling and their staff are. Listen, I'm delighted.

**The Chair:** Mr Conway, please, just complete the question.

**Mr Conway:** Except the problem is Bill Farlinger was getting this stuff. In fact his response to your panel was kind of a middle-finger salute. I've got the letters here and it's quite an impressive response from Mr Farlinger.

I hope you're right. I mean, God, it can't get any worse. But your report went up and nothing seems to have changed.

**Dr Hare:** Of course one of the reasons why nothing seems to have changed is that all the time we were writing that, we didn't know the board had this plan to go and get Mr Andognini and his team in, that in fact the answer was to bring in a radically stronger solution than we would have dared to recommend. It didn't occur to us that that was the thing to do.

**Ms Churley:** Dr Hare, I'm really worried about the billions of dollars that the recovery plan — I know you're not an economist but I think this is an important question. My question is, do you have any idea from your history with Hydro why Hydro's cost and demand forecasts have been so unreliable and out of whack; for instance, Darlington's cost jumping from \$4 billion to \$14 billion? I could go on with other examples, but I do want to have the time for you to answer that question. I'm very worried about that. I don't believe it's possible to freeze rates, for instance, even at the amount they're saying it'll cost now, but I'm also worried it's going to be a lot more.

1500

**Dr Hare:** I don't see any way in which you can solve the present situation without spending a great deal more money, in addition to servicing the existing heavy debt which, God knows, is outrageously high. How does it happen? It happens obviously by taking bad advice — I will not say from economists — but at any rate certainly not from people like myself.

Let me qualitatively say why Darlington cost too much and then you can apply it to the entire situation. It was (1) that the original figure of \$4 billion was ridiculously underestimated; (2) that there were constant delays in the construction of the enterprise, imposed partly by the provincial government looking for more favourable times to borrow money and things of this sort; (3) by absurd forecasts of future demand — perhaps the most important thing was an exaggerated idea of future demand; and (4) by delays over technical problems with the Atomic Energy Control Board. I could add a fifth, which was the unsympathetic attitude of the local authority at Newcastle to the enterprise.

The whole thing was a nightmare of public financing. I would be prepared to lay a bet — not as an economist or as an engineer, but as plain Ken Hare who is damn nearly 80 and therefore not very much afraid of his enemies any more — I would be prepared to bet that if that had been built properly, with no delays, it would have been built for less than half the actual accrued cost.

**The Chair:** Dr Hare, may I thank you on behalf of the committee. My colleagues I think will share my views that you've been very helpful and we have appreciated your evidence. I hope if we have cause to call upon you, you'd be prepared to attend upon the committee again while the hearings continue. We'd appreciate that very much. There may be some requests of you to offer more information by way of written comments, and we would certainly welcome your response in that regard as well.

**Dr Hare:** Thank you, sir. It's not far from Oakville.

**The Chair:** We thank you very kindly for being with us, Dr Hare. You are excused. Thank you.

#### ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO

**The Chair:** The next witness will be the Association of Major Power Consumers in Ontario. That will include David Goldsmith, Arthur Dickinson and Mark Rodger. If you will take your place at the witness table, please, we'll give you a moment or so to get organized and then I'll call upon you formally.

Welcome to the committee and to the hearings of the select committee. I would ask, for the benefit of Hansard, that you identify yourself. Then if you would be prepared to present your brief and we'll proceed with questioning by caucus in rotation.

**Mr David Goldsmith:** Thank you, Mr Chairman. My name is David Goldsmith. I am the past chairman of the Association of Major Power Consumers in Ontario, or AMPCO. On my right is Arthur Dickinson, the executive director of the association, and on my left is Mark Rodger, counsel to the association.

I would like to summarize some of the points in the brief. I am sure that you have received it already.

AMPCO is an association of 65 large industrial companies in Ontario generating more than \$60 billion in

annual sales. Our members collectively spend over \$1 billion a year on electricity and we represent over 16% of Ontario Hydro's primary electricity sales. Essentially, as one voice, we represent the largest group of end users of electricity in Canada. We employ over 100,000 people directly and 300,000 people indirectly.

Our main concern is that electricity rates in Ontario are not competitive. This is the issue for industry in Ontario. In 1992 in the United States they introduced the Energy Policy Act leading to FERC opening up the transmission system and creating competition in the wholesale market for electricity in the United States. This has led to industrial rates falling across the United States and, at this point, Ontario's rates are some 20% to 30% above competitive levels of industrial rates in the United States. That's a very important concern to our members. For the majority of our members, electricity represents some 15% to 25% of operating costs. For a smaller number of members, electricity represents up to 70% of operating costs.

The result of the recent nuclear operating deficiencies in Ontario has been increases in all of the rate options that Ontario Hydro has developed in the last couple of years to provide industrial users with flexibility in how they operate. For example, Ontario Hydro's numbers indicate that RTP 1 customers will see an increase of 7.8%, RTP 2 47%, surplus users 20% and DDS users 25%. These increases will critically undermine new or existing investments in Ontario and affect jobs.

We are concerned that Ontario Hydro's proposed solution has been adopted too quickly. Ms Clitheroe indicated that at least \$6 billion of additional spending, including \$1 billion of new capital, will be required over the next five years if the recovery plan is adopted. This has the potential to spill into rates for all customers, and until other options have been carefully examined, Ontario Hydro should be limited in what spending it can commit to.

We believe that this committee should explore using an independent third party such as British Energy to take a critical look at the recovery plan from a different perspective and to examine options such as either keeping Bruce or Pickering A or both open and recruiting former staff to assist in the process. This would have clear and immediate benefits over the proposed recovery plan by reducing the cost of replacement energy.

We're also concerned that the problem extends beyond the nuclear division. As we stated on page 2 of our brief, "The 'cult' of the nuclear division is far more likely to be a manifestation of a management culture in Ontario Hydro which transcends organizational boundaries, spilling into every area of operation."

We've provided the committee with a summarized history of the attempts that our association has made at the last four Ontario Energy Board rate hearings to have Ontario Hydro accept, introduce and table results of benchmarking activities. Ontario Hydro's response was far from satisfactory. It is our view that, had bench-



marking been introduced sensibly, many of the problems in the nuclear division could have been identified earlier.

Moreover, we are not reassured by the findings in the IPA report, which use best industry practices to measure the nuclear division's performance. The outcome was clear failure, and AMPCO is convinced that the same shortcoming will be found in the other business units. The only way to ensure Ontario Hydro's operations become efficient is to expose them to the discipline of competitive market. This is why release of the government's white paper is so important. We believe that, other than for safety reasons, all significant investments and decisions regarding plant shutdown in nuclear operations should be frozen until the white paper is released. Too much is at stake to do otherwise.

#### 1510

Again, referring to our report, we have indicated that it's our belief that a large proportion of the costs identified in the recovery plan are not directed to safety but to preparing and positioning Ontario Hydro for competition, and we believe this is an inappropriate position for Ontario Hydro to take as a public monopoly.

Furthermore, we believe that other options should be considered. There is a significant danger that Ontario Hydro will use this apparent crisis to press ahead with further investments and spending that cannot be justified on pure economic grounds. Based on the evidence presented, there is no urgency to make any investment decisions today since the nuclear plants continue to operate safely and particularly when the government's white paper on the industry restructuring is anticipated.

Finally, we have concerns that Ontario Hydro cannot legally pursue some of the remedies it has identified, and we have outlined these concerns in our submission. It's our understanding based on some information that was submitted to this committee yesterday that there is now a contradiction in the information that Ontario Hydro has presented regarding its own opinion of the legal viability of some of the options.

We believe it is incumbent on Ontario Hydro to release those legal opinions on which they are relying for their proposed financing options. We believe this committee needs to be fully apprised of Ontario Hydro's legal status and the government's position with regard to possible intervention before recommending any solutions.

Just to summarize the specific recommendations in our report, first, we feel the committee should recommend an independent, internationally recognized third party such as British Energy to take a critical look at the recovery plan, to provide an independent assessment and to determine whether better, lower-cost nuclear options exist. The government should not issue a policy directive or grant Ontario Hydro by any other mechanism a reprieve from its legal obligations under the Power Corporation Act until this independent third-party assessment has been completed and the results made public. Ontario Hydro should freeze major nuclear spending and operating decisions pending such a review.

We should explore the possibility of developing a public-private partnership with an organization such as British Energy to inject tested solutions into the nuclear operation. Ontario Hydro should be directed to table immediately its detailed benchmarking initiatives for public review. Ontario Hydro cannot be allowed to regulate itself.

The government must release its white paper to set the context in which the committee can review the nuclear recovery strategy, and Ontario Hydro should be directed to produce immediately all legal opinions the corporation relies upon for its proposed financing options.

That summarizes what we have presented to the committee, and we would be pleased to answer any questions.

**The Chair:** Thank you very much, Mr Goldsmith. We appreciate that, and we will proceed by caucus. We'll begin with the government caucus.

**Mr Galt:** Thank you for your presentation this afternoon. It was most interesting and, of course, very significant on your operations, free trade, competition, especially when you tell us that you're paying 20% to 30% more for electricity here in Ontario than you would on average throughout the US.

It was kind of interesting about a year and a half ago, being involved with regulatory reform for the Ministry of Environment, meeting with some people from the Ford Motor Co. I was rather shocked to hear the figures they were using at that time. They were telling me that in 1985, of the 17 regions in which they produce cars in North America, Ontario had the cheapest electrical rates of the 17 regions of North America where they made those cars. They also told me that by 1995 they had slipped to the 13th or 14th — I wouldn't want to be quoted on one or the other, but it was one of those two positions — most expensive for electricity to produce cars in North America. That certainly does not help Ontario to be in a competitive position, and you're telling me that you're looking at a significant increase.

We have talked quite a bit about cults, and we have beat that word up quite a bit. You are saying today that it's through all segments of Ontario Hydro. We have had a lot of segments of Ontario Hydro come before us, and they have been very consistent. They have all said, "It's not us." But I did hear yesterday, and I was extremely disappointed when, I think he was, the president of the society came and said the status quo was just fine and "We'd like to continue." I may have beat him up worse than I should have, but I could not believe that anybody would come before us and tell us the status quo was satisfactory. I couldn't believe anybody would have that kind of gall.

Tell us why you think the cult — or nuclear culture, as Mr Strong said, or Mr Farlinger. There's some consistency there. We also heard the previous chair of Hydro use similar terms, but he had brought it under control. Strong said he improved it. We now are in this position where finally it has been brought to a courageous head and to the point that the select committee is looking

at it, but Farlinger did bring it to a head. Tell us about your opinion that this cult is throughout all segments of Ontario Hydro.

**Mr Goldsmith:** I think you have already answered part of your own question with the reaction of the society.

First of all, I believe that, had you asked the nuclear division that same question prior to the release of the IIPA report, you would have had the same answer as you are getting from all the other divisions: "It's not us. There is nothing wrong. We are doing quite well, thank you very much. The AECB has approved our operations. Oh, there's the odd problem here and there, but everybody has problems."

It's true that everybody has problems, but the type of management culture that was described in the IIPA report, which is an inability to deal with labour relations, a lack of accountability of management from first-line supervision on up, a lack of authority from first-line supervision on up to make things happen, a lack of direction to that management and supervision, a lack of vision perhaps, these are things that are not unique to the nuclear division. These things start at the board of directors of Ontario Hydro and, quite frankly, knowing some of the individuals involved, I'm shocked that Dr Kupcis resigned and not the board.

**Mr Galt:** We're talking for many years back, all stripes of government?

**Mr Goldsmith:** Oh, yes. This is not a government issue. This is a matter of a large corporation that did not have direction from the top and went from a very focused mandate probably 20, 30 years ago and before that — and that mandate was growth, construction, design and management of those operations, and it was doing very well at them in those contexts — to one where all of a sudden they changed direction, slowed down, had to consolidate and stabilize, and they weren't prepared for it. Over a period of years — I don't think this happened overnight — the corporation got to the point where we find it today.

**Mr Galt:** I'd like to change direction just a little bit here. My understanding of the Power Corporation Act is that you're limited in what you can do on producing power, cogeneration, if you buy from Ontario Hydro. If that was opened up, how would that change your operation? How would you see that as different?

**Mr Goldsmith:** You're talking about allowing open access to the transmission system?

**Mr Galt:** That you could cogenerate or produce power and then top up whatever you needed from Ontario Hydro.

**Mr Goldsmith:** I believe there is no restriction on doing that today. The restriction is on selling power into the grid. If I want to, as a user, generate my own power and replace what I'm buying from Ontario Hydro, I can do that. They may or may not accept my excess from me, they may or may not supply me enough to make up the difference when I can't generate, but I can do what I want for myself. The issue is access for my generation to the grid to sell my excess or to buy someone else's excess,

and that would have a major impact on competition — positively, I mean.

**Mr Galt:** If you were producing your own, they might not give you the power to top up is the concern that you are expressing?

**Mr Goldsmith:** That's correct.

**Mr Galt:** We heard this morning from the Ontario Energy Board in discussing, as I described then, what sounded more like a toothless tiger, "Yes, you can run it before us, but neither the Minister of Energy, the Ontario government or anyone else has power to change what Ontario Hydro would decide on rates."

If you could see your picture on how the Ontario Energy Board should be able to operate in setting the rates or penalties, incentives, whatever, how would you go about it?

1520

**Mr Goldsmith:** We described our position on regulation in our submission to the Macdonald committee. I think the answer to that question really has to be phrased in the context of what the utility industry looks like at the point in time. For example, in a competitive environment where the main regulated monopoly would be the transmission system, we believe that should be set up with an incentive form of regulation and that the regulator, whoever it might be, needs to have the skills to analyse and understand that type of system operation. I don't believe the current Ontario Energy Board is equipped for that, but whatever the regulator is of the future electricity system, our belief is that it should be set up as an incentive regulation.

**Mr Galt:** Of the people who have come before us, very few have given any suggestions on how the recovery plan might be developed in a different sort of way. The Power Workers' Union came forward with some suggestions. If you're familiar with them, would you agree with some of their suggestions? Is that not in order? How would you see it?

**Mr Goldsmith:** I believe, if I understood Mr Murphy correctly, his main focus was to keep Ontario Hydro's options open for continuing to operate all the facilities that are being shut down, and in particular he offered voluntary labour to support the mothballing of the heavy-water plant. We've said for a number of years that we believe Ontario Hydro should be shutting down the heavy-water plant, that it's not necessary. Even assuming all the nuclear stations stay in operation, we don't need it. We don't need the water. We have plenty. So we don't feel that is a viable option.

On the other hand, some of the suggestions Mr Murphy made did have some merit, including the possibility of public-private partnerships to develop some of these facilities or to rehabilitate some of these facilities. That is a suggestion we've made in the past.

**Mr Galt:** We've heard different discussions, we've had the British picture laid before us this morning, talking about improved safety, improved pricing. Everything seemed just wonderful. We did not see any down side to it. I'm sure there has to be some out there some place. Have



you been following this, the British, how it has evolved, and do you see that a similar thing might work here in Ontario?

**Mr Goldsmith:** I believe the last witness said it very well when he commented that there is probably no unique right way to do things.

**Mr Galt:** But there are unique wrong ways of doing things, he said.

**Mr Goldsmith:** Yes, there are. We don't support all aspects of the British model.

**Mr Galt:** What don't you support?

**Mr Goldsmith:** The power pool as they have it set up is set up in such a way that it can be gamed and has been gamed by the generators, gamed in the sense that generators force the pricing one way or another to support themselves, and the regulator there was not strong enough to control that. So for the first few years since 1989, when they first "commercialized" the utility system there, even though almost all customers benefited, they didn't benefit nearly to the extent they could have, had proper competition been introduced.

**Mr Galt:** The feeling I got from it — but I never got really clear how it operated through the grid — it was a pooling system, the generators pooled in and then they sold it to the best price out. That was a feeling I received when they were talking earlier this morning.

**Mr Goldsmith:** There's a system operator who controls which generators are on line at any given time, and the generators put bids in, how much they're willing to sell their energy for: "I have so many kilowatt-hours and I'll sell them to you at so many dollars."

**Mr Galt:** Almost like a mini-auction approach.

**Mr Goldsmith:** What they do is, they take the cheapest ones in first and depending on what the demand is, they build up the generation to match it using the cheapest one first.

**Mr Conway:** Mr Goldsmith and colleagues, thank you for attending. You've been around this debate a long time and I appreciate what you've had to say today. I want to focus in on the part of your brief, your presentation, which concerns itself with Hydro's recovery plan and particularly the financial components of that plan. You recommend on page 6 of your brief, "AMPCO believes an essential prerequisite of any review of Hydro's financial justification of its nuclear recovery strategy is an independent, comprehensive verification of Hydro's projections." Then you go on to basically say that it's been your experience over the years that Hydro's numbers are just unreliable, particularly in first instance. Is that a fair —

**Mr Goldsmith:** You've related our comment to our past experience. I'd like to make it a little more temporal in the sense that what we said in the sentence following the one you read is, "AMPCO has little confidence that Ontario Hydro can itself properly assess what a nuclear recovery program should cost, let alone whether such a project should even be embarked upon." Our concern there is that we have just had a scathing report on the management capabilities of Ontario Hydro, and to turn

around and tell that same management, "Okay, you blew it, now fix it," and for them to say, "This is the recovery plan," seems to me a little bit naïve.

**Mr Conway:** I don't disagree with that. One of my concerns is that four years ago, under very strong and capable leadership, Maurice Strong came to these very rooms and said: "I've got a fix. Here it is." It was quite well reviewed, I remember at the time, I think by most people. But one of the things we clearly did not understand was that the downsizing was taking out or was about to take out of the corporation some very valuable human resources that were going to exacerbate, according to what we now hear from people like the technical advisory committee, the good operating standards of the nuclear power plants.

**Mr Goldsmith:** If I could just rephrase one part of that, it's my opinion that it was not the downsizing per se that did it. It was the method of downsizing that did it.

**Mr Conway:** All right, yes, but the fact is that according to a lot of the evidence we're now seeing, that recovery plan, I'm sure inadvertently, undermined or worsened one of the conditions they were trying to heal.

Let's look at this recovery plan. It came very quickly. We saw Dr Andognini and he was, I must say, a very impressive witness. I thought he was quite impressive, but I for one was struck by the fact that the board got the assessment of the recovery plan in the space of a few days and basically decided to go forward with a multibillion-dollar recovery plan on the basis of some questionable numbers and without any independent analysis of the whole situation.

Looking at that recovery plan, one of the key ingredients in it is the replacement energy cost. Does AMPCO have any views about the reliability of those numbers? They're key numbers in this plan. They're the first or second-largest cost item in the recovery plan, depending on how you look at it. If you take the low estimate, it's about 40% of the total cost of \$2.5 billion. It's replacing the energy that will be lost to the corporation because seven nuclear power reactors will be laid up for a period of time.

What would you have to say to the committee about the reliability of the numbers in that part of the recovery plan?

**Mr Goldsmith:** They can't be much better than estimates; they're guesstimates. You're talking about a regime which doesn't exist today, and what I mean by that is a tremendous demand for electricity that is not being filled by the old stalwart, the nuclear base load, which means it's going to have an impact on natural gas supplies, oil supplies possibly, coal supplies, purchases from outside the province. None of those items, the three fuels or the purchases, is under Ontario Hydro or Ontario's control, which means that should this surge in demand for those inputs drive the price of those inputs up beyond their market price today, that will have a multiplier effect on the numbers that are being used there.

**Mr Conway:** Are you still with IVACO?

**Mr Goldsmith:** Yes, sir.

**Mr Conway:** For the benefit of the committee, IVACO is a major corporation doing business in eastern Ontario and in the US. You're at Hawkesbury, near the Quebec border.

**Mr Goldsmith:** Yes.

**Mr Conway:** Do you have any power purchases with Quebec?

**Mr Goldsmith:** No, sir; they're not allowed in Ontario.

**Mr Conway:** You've no historical relationships. We've got them up the line. I just wondered if you had. Are you aware if Quebec Hydro has any meaningful power to sell into the grid in your part of southeastern Ontario?

**Mr Goldsmith:** There's a high-voltage line within sight of our plant on the other side of the Ottawa River. Yes, there is power available. On the other hand, Quebec does have technical problems with selling power into Ontario. They have to have the generation off their system and phase it into Ontario Hydro's system to do that. The answer is yes, there is capacity availability. There are technical limitations to how often or how much they might want to sell.

1530

**Mr Conway:** You're business people. We've been told by Hydro that they've got a recovery plan that is, even assuming best estimates, going to leave the corporation with negative retained earnings, operating losses, and, they tell us for a few years at least, they're not going to be able to meet their statutory debt retirement obligations. What kind of impression do you think that's going to leave out in the marketplace? I ask that seriously.

**Mr Goldsmith:** I don't take it any other way; I'm just trying to think of how to answer it. It's not the way you run a business. It's not going to create a healthy business for a competitive market. I think it's counterproductive, is the bottom line.

**Mr Conway:** I was struck by something you said in your testimony, and I got the impression from what you said that when you look at the recovery plan, you imagine that perhaps some of this recovery plan, perhaps more than a bit of this recovery plan, is aimed at positioning Ontario Hydro for the new competitive marketplace and not for recovering the troubled parts of the utility. Did I hear you suggest that?

**Mr Goldsmith:** It's the expenditures we were referring to. I believe what we said was that Hydro is using the crisis to generate approvals for expenditures which can be used to create a better position for a competitive market, to position it better for a competitive market. Certainly the issues you've referred to, the negative net income, negative equity situation, additional borrowing at a time when they could be paying off debt, are not conducive to preparing for competition.

**Mr Arthur Dickinson:** I wonder if I might add something to my colleague's comments. You're asking about how it's being received in the industrial community. When the monopoly supplier advises the community at large that costs are going to increase by \$5 billion at least,

or \$6 billion, over the next five years, that is hardly a reassuring message to industry, which is trying to compete in an international market these days. As a result of the problems with the nuclear facilities, as David already referenced, some of the rate options which are being put in place to assist industry here in Ontario to meet the competitive challenge are going to increase substantially in price.

I already know of one facility that is shut for sure now: small, but nevertheless in that community it's important. It's an abrasives operation in Niagara Falls; another one, Norton Advanced Ceramics, is almost certainly stalling new investment because of these increases; the CEO of a major pulp and paper manufacturer has already advised the Premier that unless this white paper is delivered and competitive electricity put in place, they doubt they'll be able to put more investment into Ontario. There are lots of negative messages stemming from this whole situation.

**Mr Conway:** On the other hand, we had a very eminent Canadian scientist, before you arrived to testify, Dr Ken Hare, who's well known in this debate and many in the committee took comfort in the fact that Ken Hare, who's been around this debate a long time, says he feels comfortable now because he senses the new leadership has the guts to do what predecessor groups were unwilling to do or incapable of doing. Do you have that same degree of comfort that there's a gutsiness now over at 700 University Avenue that has just not been around for a while?

**Mr Dickinson:** I think it's refreshing that they're being a little more honest than they have in the past about the problems they're facing. I'm not sure guts comes into it. From our perspective, the issue is the economic environment in which we operate. We want to see the best possible economic solution put in place to deal with Hydro's problems. We're not satisfied that what has been examined to this point in time is adequate.

**Ms Churley:** Thank you for your presentation. I want to start to talk about you as business people and concerns about rates. I just want to clarify something with you and make sure I've got it right before I ask the question around it. I understand that some of your members have been taking advantage in recent years of so-called load retention rates. I understand that the rates are lower than rates generally available and that the whole idea behind it is that they're one-off deals to encourage manufacturers, say, to stay on the Hydro grid and not to self-generate. Is that an accurate description of what that is?

**Mr Dickinson:** Not only not to self-generate, but to avoid moving investment into other jurisdictions. That's reasonably accurate.

**Ms Churley:** My question around that is — I understand that it was predicated on the basis of the existence of a power surplus. Is that right?

**Mr Dickinson:** Essentially I think that's correct.

**Ms Churley:** I think that's correct. From what I understand about it, that is a significant question, maybe, because now that surplus is gone. I'm just wondering if you have any idea whether some of your members will be



negatively affected because that surplus is gone now. Do you know of any who are negatively affected or who might be, who might even go out of business because of this?

**Mr Dickinson:** I've just mentioned two: where investment in one case has been stopped, and the other case where they've shut down a plant.

**Ms Churley:** Were these companies taking advantage of this?

**Mr Dickinson:** No. To be honest, I don't know. I'm the executive director of AMPCO. But I am not privy to all the load retention rates. That is something Hydro will not reveal. There's an issue of — what's the word I'm looking for? — confidentiality. At the various rate hearings we have made the point that we're concerned that these deals are being put together, but nobody is aware of who is doing a deal. This is creating imbalance in the energy market. One company in one sector may be getting a deal and not another. That is creating problems for my members. While we understand and have some sympathy with what Hydro has done, we have concerns about the manner in which it is being done.

**Ms Churley:** Do you think your members would be open, at this point in history, to use this as an opportunity, again coming back to the fact that surplus isn't there any more, to work with the government and Hydro in some kind of partnership on energy conservation and renewable and switching power? Do you think that business would be interested in now seriously tackling that? Hydro before, as you know, didn't like cogeneration, and frankly, neither did governments because of the debt, and wanted to keep all that within its own purview. What do you think?

**Mr Dickinson:** I can't speak for individual companies, obviously. What I will say, though, is that all of them have been pursuing energy efficiency initiatives where they make economic sense. Inco is a good example. They've made substantial reductions in their energy use because of the energy programs they've put in place. Sometimes they've taken advantage of program initiatives that were available from Ontario Hydro in the past, likewise from the Ministry of Energy as it was. In terms of whether or not they'd be prepared to go into partnerships on energy efficiency, I'm not sure what that means.

**Ms Churley:** I'm not either. I just think this does give us an opportunity, that Hydro has come forward with a plan for spending huge amounts of money, billions of dollars. You may have heard me questioning Dr Hare earlier because of very unreliable forecasts in the past around not just Darlington; I mentioned that in particular. I'm very worried, as I expect you are, about the final cost to this plan.

I'm not naïve enough to think that energy conservation and switching and all that right now would solve the immediate problem, but I see it as an opportunity as well, because that surplus isn't there now, to take it more seriously and seriously invest, as opposed to just nibbling at the edges. You're right that some have done better than others.

1540

**Mr Goldsmith:** I would object to the presumption in your question that it hasn't been taken seriously so far. To my knowledge, industry investment in alternative fuel supplies, alternative energies and so on have been limited not so much by how seriously they view the situation as by how advanced the technology is for those to work. Part of it is economically driven, part of it is technology-driven, but the technology is not there today to do some of the things that I think you're referring to. Also, it's not necessarily more energy-efficient. It may be more electrical-energy-efficient to do some of the switching. It is not necessarily more energy-efficient in an overall sense.

One of the examples quoted by the OECD in Paris, their energy group, in analysing energy use in Canada is that the most energy-efficient way of heating a home in a climate like ours is with a ground-source heat pump. If we, as let's say the province of Ontario, made the decision that everybody in the province was going to switch to heating their home with a ground-source heat pump, we would reduce energy — I'm using global energy — consumption by half because the majority of energy use in Ontario is home heating. On the other hand, we would destroy the electrical system because there just isn't enough electricity to run them all.

**Ms Churley:** I think there needs to be more debate about it because obviously there are those who are involved in alternative sources of power who take a different view. I believe that it is an important opportunity for us to explore more and I'm personally disappointed that the recovery plan came so quickly, but there's nothing, no other options either for short term or long term, there.

I wanted to come back to Darlington. You talked earlier about — and I'm not talking about you personally, but I guess it's AMPCO — its position on building Darlington way back. I come back to that because I think there have been miscalculations and mistakes made for a very long time about forecasting, for instance, how much power we think we need or we thought we needed at that time. What was your position on Darlington when it was first —

**Mr Goldsmith:** Our position on forecasts is that the best forecasts are done after the fact.

**Ms Churley:** We found that out.

**Mr Galt:** Like the weather.

**Mr Goldsmith:** At the time, we supported the building of Darlington, and I would say we would still support that decision because the information that was available at the time indicated that load growth would continue at a rate which would support the construction of Darlington. Darlington's biggest problem was delays, not so much because of escalating costs that result from starting and stopping and starting and stopping but because one of the rules of the game for Darlington was, and I assume it's generally true in the nuclear industry in Ontario, that as time goes on, regulations and regulatory requirements change.

Every time the Darlington construction project was stopped and restarted, it had to be redesigned to meet current regulatory standards before it could proceed with construction. Those redesigns were done in the field and were add-ons to the original design. The final Darlington we got, however good or bad it is, is not the Darlington that was originally designed. It's not the Darlington that was originally budgeted. It is a different animal entirely. I wouldn't tar the nuclear business with the brush of Darlington, which was a product of a whole series of events and decisions.

**Ms Churley:** But you also supported Hydro's \$60-billion expansion plan put forward in the 1980s, and I guess that's you said earlier applies here, that the best way you can predict is after the fact.

**Mr Goldsmith:** I know everybody else is saying right now that the load growth didn't materialize, but had it materialized — even after it was clear that the load growth projected by Ontario Hydro in 1989 was not going to materialize, a difference of as small as 1% a year in the load growth projections of Ontario Hydro one way or the other would have had a phenomenal impact on the ability of the province to cover the load. We're talking about very small differences here.

**Ms Churley:** So you don't regret your past position on relying so heavily on nuclear?

**Mr Goldsmith:** No, I don't at all. My colleague was just reminding me that the position the organization took in the 1980s regarding the construction of Darlington was that the government approval should be given with the actual construction held until the load growth justified it. In other words, the approvals process itself was a multi-year process and the association was saying, "Let's get through the approvals process and then do the actual work when it's necessary."

**Ms Churley:** How much time do I have, Chair?

**The Chair:** You have about a minute and a half.

**Ms Churley:** Oh, well, I won't ask the more complicated question. To sum up, in view of what you said about concerns about rates, you seem to be suggesting that Hydro should hold off on moving forward with the recovery plan that was so very quickly adopted. I think I heard you say that. I think we all we would agree here that we were surprised at how very quickly, after the problem was outlined, the board accepted that recovery plan.

**Mr Goldsmith:** And with how little analysis.

**Ms Churley:** Yes. You would like to see the outside analysis done and not to proceed at this time until that's done and there are more alternatives put in place or perhaps a better alternative?

**Mr Goldsmith:** That's correct.

**The Chair:** Before I go to Mr O'Toole, just a question to pick up on that last part because I've asked legislative research to get some information for us, if necessary. The evidence you just gave a few moments ago about the escalation of costs on Darlington, as a case in point, were attributed in some large measure, according to your evidence, to changing codes, new regulations as the construction was unfolding. Is that correct?

**Mr Goldsmith:** That's correct.

**The Chair:** When the original plan was given approval, didn't that lock in all of the regulations at that moment in time?

**Mr Goldsmith:** No, sir, it didn't. The way the nuclear business worked — had they proceeded with the construction of the station at that time and gone from start to finish, then I believe what you just said is correct, but that isn't what happened, and every time it stopped and restarted, it had to restart according to the new regulations in effect at that time.

**The Chair:** I'm just confused because you gave the impression that it was required to stop, to redesign because of new regulations, but that's not exactly what you're saying now?

**Mr Goldsmith:** No, that's not what I meant. I'm sorry if I created that impression.

**The Chair:** Please, maybe you'd just elaborate.

**Mr Goldsmith:** The numbers I've seen indicate, for example, that had Darlington started, gone through to completion and started up without interruption, it would have cost about \$6 billion as opposed to the original \$4 billion that it was estimated at and the \$14 billion that it actually cost, which I guess is similar to the number the previous witness was indicating when he said something like less than half.

The difference between the \$6 billion and the \$14 billion is a combination of things. Part of that is cost escalation over the years of delay; part of that is mobilization and demobilization of construction over the years of delay. I believe the largest portion, and I do not recall the number, of that \$8-billion overrun was caused by redesigns of the plant on the fly to comply with changing regulations as the construction was started, each time it was started.

**The Chair:** Thank you. I understand.

**Mr O'Toole:** Thank you very much. I'm finding it quite interesting thus far and some of my questions have been sort of addressed. We heard from members of the board yesterday, Mr Bullock and Mr Kerr, who both probably are, in some respects as members of the board, members of the consumer group given that Noranda, I think, is one of the companies, and Laidlaw is the other. I suspect that as members they supported the recovery plan and seem to be fully on side as board members and, as they said yesterday, as taxpayers. We're all basically in this together, I suppose we're looking for the answer, but I'm intrigued when I go through the annual report. You're probably familiar with Ontario Hydro's annual report, which was published in February 1997. So a lot of the detailed accounting, probably all of it, would be done prior to that, some time in 1996.

1550

I'm going to dart around a bit but I'm trying to establish in some linkage a point. I'm going to start with the function of the OEB. I'll read it here. It's a truncation of the summary notations made on the financial statement. This is notation 1 here. It says: "After considering the recommendations of the Ontario Energy Board, Ontario



Hydro's board of directors, under the authority of the Power Corporation Act, establishes the electricity rates to be charged to customers." In other words, they listen and then they do what they want. Basically that's what the OEB said here this morning. I guess you concur with that in some respects, its ineffectiveness as a regulator.

I'm going to go on and make several points. If you have a problem with the point I'm trying to establish, interrupt at any time.

Further down in that same statement it says that the board "...operating in a non-rate-regulated environment, said these amounts would be included as gains or losses of the current period. The board of directors has used its rate setting authority to specify that costs of the rehabilitation program for steam generators at Pickering 'A' and 'B' and Bruce 'A' nuclear generating stations shall be deferred for recovery in future periods." So they are arbitrarily loading into the debt sheets somewhere, continually, at their discretion, to stabilize rates; although they're really not the rates. It's not full-cost recovery. "Under generally accepted accounting principles for enterprises operating in a non-rate-regulated environment" — they admit clearly they are non-regulated — these costs would be expensed as incurred."

This is the most important and most interesting, I found: "The board of directors has also used its rate setting authority to specify" — get the date here; this is 1996 — "that the nuclear recovery expenditures" — which they knew; they got the reports; they know what's wrong; they don't need some group to come in and tell them — "planned to be incurred over the period 1997 to 2001" — that's the nuclear recovery plan; all been thought through in 1996; it's right here in their annual report — "shall be charged to operations in 1996."

If I go back to the actual consolidated statement, the operating expense, they did in fact charge the first \$2 billion. If you look at note number 6, the consolidated statement, it says very clearly "Corporate Write-Offs." "Hydro has embarked on a program to ensure that adequate nuclear recovery plan expenditures" — that's what we're talking about here, the IIPA response, which some outside person came in and put some numbers to; they've already accounted for the first leg of it in 1996; not the buying of the fuel, just the technical recovery — "are made in future years to allow for the achievement of its nuclear excellence strategy." These costs will be incurred in the years 1997 to 2001 but charged to 1996 operations.

I put it to you, all through Ms Clitheroe and the rest trying to give us some kind of full-cost accounting — I'm sorry, I don't get it. That's why no one in Ontario, as the current owners, all of us here, has any confidence in the openness of their accounting principles; absolutely untransparent, as admitted to us by the energy board and others.

I'm going to one other function when it comes down to the specific rate process, the hearings which you participated in. I'm referring to the hearings I referred to this morning, HR 23 and 24, which were basically rate

hearings. They said basically the same thing, the same response, from the process I've just described, that the board decides the rates; on what basis of accounting or standard principles, I have no idea.

They are just going to download another \$8 billion into public debt really. You want British Energy to come in here and take this over. We're trying to be competitive. How do you think we're going to charge off this legacy? Mr Conway has told you the retained earnings are going to be in a negative position. In fact they've written off \$7 billion in the last four years against their asset values. We were told that all the assets are overvalued by some \$12 billion. Who is going to suck up the debt? How is that going to be expensed out? Is it going to be charged in rates like a tariff on the line? Can you respond? You want competitive rates, and I don't think we're headed in that direction.

**Mr Goldsmith:** Certainly not with a plan like this, which is our concern with the plan. You've made a number of points —

**Mr O'Toole:** Are they accurate? I'm reading.

**Mr Goldsmith:** For the most part, you're making statements of fact. They are not disputable.

**Mr O'Toole:** That's right.

**Mr Goldsmith:** One thing I would like to mention — you referred to the openness of Ontario Hydro. I think we have a problem in Ontario Hydro today. The corporation is still a public monopoly. It is still, at least theoretically, accountable to the people of Ontario.

**Mr O'Toole:** An unregulated public monopoly.

**Mr Goldsmith:** But it's still, at least theoretically, accountable to the people of Ontario and to the government of Ontario, and to the Legislature of Ontario as representatives of the people of Ontario, yet there are people in the management of Ontario Hydro who refuse to release information or to discuss issues relating to the corporation or the corporate management on the grounds that it is preparing for a competitive environment, and release of this information would have a negative impact on its competitive position should it become competitive.

I think this is a conflict of interest, a conflict of its duty to the public. What it is doing is diverting the debate. Every time somebody brings up something: "We can't talk about that. We're preparing for a competitive environment. It would affect our competitive position." That is a totally inappropriate position for a public monopoly to be taking. Part of the problems you're referring to in terms of getting the information behind the numbers, or why is this being done or why is that being done, is being cloaked under that protection, if you will.

**Mr O'Toole:** That's the cult or culture we've been referring to or someone has been referring to. Certainly I've heard it. I'm just using what I've heard.

I'm going to conclude my remarks by referring to your report, page 7, which really summarizes quite nicely. I'll just read it, as I've done with the other stuff. It really supports the observation I've made. This is the third paragraph: "There is a significant danger that Ontario Hydro will use this apparent crisis to press ahead with

further investments and spending that cannot be justified on pure economic grounds." I tend to be rather supportive of that view.

I think it's the job of this committee, through the various deputants who bring a point of view to it — we're all in wait of the white paper to see the actual framework for the environment in the future. I would ask you to say, are the options exclusively nuclear? Is that the one way we should go? We have to have guaranteed power. You said the fossil and the other kinds of fuel sources don't even reside in the province. We're going to have to buy them. Is nuclear the main option? That's the strategy. This whole strategy is predicated on, "That's the option."

**Mr Goldsmith:** I'm not sure if that's what it's predicated on. I can't really answer your question because I haven't done the analysis either. I'm not sure I'm competent to do the analysis, but whether I am or not, I certainly have not done it, any more than Hydro's board has or anyone else has. I believe the analysis needs to be done by somebody who knows how to do it.

**Mr O'Toole:** But it is the nuclear option. That's clearly the title of the report. It's the nuclear recovery plan.

**Mr Goldsmith:** The nuclear recovery plan seems to be to shut down a good portion of the nuclear system and just maintain the rest of it. To me, that's not a recovery plan.

**Mr Kwinter:** Would it be fair to say that your goal is to have security of supply at competitive rates in the most benign environmental situation we can find?

**Mr Goldsmith:** Yes, it would. That's actually the mission statement of our association.

**Mr Kwinter:** In other words, you have no particular leaning one way or the other as long as you can meet those goals, as long as they meet those criteria.

**Mr Goldsmith:** That's correct.

**Mr Kwinter:** One of the concerns I have, and it was just touched on by Mr O'Toole, is that the ability of Hydro to deliver power at competitive rates is going to depend to a great extent on what kind of competitive environment they're going to be working in. If they are a monopoly, they go one way; if they are not going to be a monopoly, they're going to have to go another way. We had the chairman of the Ontario Energy Board questioning the ability of Hydro to make these expenditures, meet the mandate to keep energy rates frozen until the end of the century and to service their debt and all of the other things within a competitive environment, and yet we don't know what environment they're going to be in. Do you have any comments on that?

1600

**Mr Goldsmith:** First of all, we don't believe they have the ability to do those things you just said in the current environment, not a competitive one but the current monopoly environment, and stay within the law. There is a law which governs the way they're allowed to operate, and we have not seen anything, and I don't believe this committee has seen anything, which indicates that they can do all of those things and remain within the law other than through government fiat, if the government of the day

chooses to excuse them from the law, which I guess through order in council or whatever the mechanism it has the right to do. But I haven't heard from the government that it's willing to do that and I don't know that there is another option that is legal. I don't think the issue with respect to your question is the competitive environment or not. The issue is, I don't think they can do what they say they can do.

**Mr Kwinter:** Which leads me to the next progression, and that is, that almost invariably means there's going to have to be a rate increase in order to be able to even come close to the projections they are putting out.

**Mr Goldsmith:** With the current plan, that's probably true.

**Mr Kwinter:** That of course is your concern as major power users.

**Mr Goldsmith:** Yes, sir, it is.

**Mr Kwinter:** The next question I have of you: We have a recovery plan. I can tell you that from questioning that we had yesterday of two members of the board of their interpretation of the minister's letter — I'm sure you've seen the minister's letter, or you know of it, that was sent to them. Notwithstanding that the minister said, "Examine all options," their interpretation was to examine all nuclear options. In other words, Andognini put forward six options and he recommended number 5 and maybe number 6. Their interpretation is that the minister has charged them with making sure they really examine all the options but there isn't, in their opinion, the opportunity to look outside of that nuclear recovery. Do you think this is something that should be done?

**Mr Goldsmith:** Absolutely. I can't imagine how a board could sit there and not ask those questions.

**Mr Kwinter:** That's the crux of the issue, and what is happening and my concern is that we as a committee which really has no control over Hydro — nobody seems to have any control over Hydro.

**Mr Goldsmith:** Not even Hydro, according to this report, anyway.

**Mr Kwinter:** Yes. So what is happening is that we are listening to people and we have people concerned, as you are, about what is going to happen when in fact the die has already been cast in that the only solution seems to be an acceptance, as the Hydro board has already done — they've accepted the recovery plan. They're going to monitor it to make sure the costs are what they say they're going to be. My question is, if the costs aren't what they say they're going to be, what are they going to do about it?

**Mr Goldsmith:** They're going to charge us for it.

I don't think the decision is irreversible. The board has made a decision; you're correct. That's a statement of fact. But this committee is reviewing the circumstances of that decision and the investigations that were done and it is still within the government's purview to listen to a recommendation from this committee which says this is not the way it should be done or that further investigation is required before deciding that this is the way it should be done. Maybe this is the best way of going, but we're not



convinced of that. We haven't seen any evidence to that effect and we certainly haven't seen a proper evaluation of the alternatives, whatever they may be.

I don't believe it has to cost \$7 billion to recover from a poor management culture. If my company was suffering from a poor management culture, which it has in the past, it wouldn't cost us that kind of money to correct that kind of problem, and I can't imagine any company where it would.

**Mr Kwinter:** You have to understand that the largest portion of the money is for replacement energy.

**Mr Goldsmith:** That's correct, but why do we need the replacement energy? That's to shut down stations that for some reason somebody feels it's better to shut down than it is to correct the management culture and get them running right. These stations have all been designated as minimally acceptable by the report from a safety perspective and an operating perspective. "Minimally acceptable" is defined in the report as meeting all safety standards but requiring management intervention to ensure that it doesn't slip and it turns around and starts to get better. That to me is not a capital expenditure. There may be some capital expenditures required for safety reasons or whatever, but they're a small part of this recovery plan in terms of dollars. We're not questioning those dollars except insofar as Ontario Hydro tends to spend a lot more dollars to do the same thing than we would spend in private industry.

**Mr Conway:** Just on that, one of the things that struck me — I said earlier in this committee that I didn't come in here with a conspiratorial frame of mind, strange as that might seem. But when you look at that recovery plan, you say to yourself that a lot of people have come to the same conclusion as you have: It seems to overreact to the problem they've got. So what might the other agenda be?

Is it, do you think, unreasonable to conclude that another agenda might be trying to position the utility for an aggressive posture in this new world of competition that almost certainly the white paper is going to recommend?

**Mr Goldsmith:** I think that is a very definite possibility, that that's what the agenda is. I think it's entirely inappropriate but —

**Mr Conway:** I ask that because there are going to be people who say, "It's only people with a conspiratorial frame of mind who are going to think that," but you don't look like a conspirator to me. I say that seriously. This is really a major issue here. I thought you put it better than anybody I've heard. If you look at what the problem was and what the response is, the response in this recovery plan seems to be dramatically more expansive than the facts of the case would seem to warrant and to beg the question, is there something else going on here?

**Mr Goldsmith:** As I said, it's certainly a possibility that that's the agenda. As I also said earlier, we have a general concern which addresses the same issue, which is that Ontario Hydro seems to be in a general way, not just with this report or its response to this report, trying to position itself for a competitive market. I think that's

totally inappropriate, because whatever the white paper says, there is going to be a successor organization or group of organizations to Ontario Hydro. But the white paper and competition is not about Ontario Hydro; it's about us, the consumers, all of us in this room. It's about creating a market that gives us choice and gives us lower costs. It's not about preserving an arbitrary entity.

**Mr Conway:** I want to move quickly to that question. As we look to the future and we look to a competitive environment, which is almost certainly coming, one of the issues that's obviously on the minds of people running Ontario Hydro is, what do we do with poor, under-performing assets that belong to the provincial utility?

I've been one of those who have been sort of jaw-boning with people like Arthur here and saying that my worry, even if we move to that — we are moving to a competitive world, unavoidably, it seems to me. One of the real questions that the Legislature and the government have to look out for is to make sure the Ontario taxpayer isn't hosed with a lot of stranded debt and poor assets.

**Mr Goldsmith:** I agree with you, and we believe, and Ontario Hydro's own numbers indicate, that without this recovery plan that wouldn't occur, the stranded asset problem wouldn't occur. But with it, it will almost certainly occur.

**Mrs Johns:** Just to preface my remarks, I guess I believe as an elected representative that the most crucial area we have to look at as members of this committee is the safety issue. I believe so far, from what I've listened to, that a lack of management and interactive labour-management cooperation could lead to safety issues. Therefore, I am a little hesitant to say that we shouldn't follow through with at least some of this plan because of the safety implications.

**Mr Goldsmith:** We've said the same thing.

**Mrs Johns:** From my standpoint, I come to the point where for two years we have a shortage of power in the province of Ontario. We have limited access in lines to get power in here. We can get, I think, 4,000 megawatts into the province through lines coming from outside of the province, either from Quebec, the States or Manitoba. Really what it comes down to is that Ontario is an island where they have to get most of their power themselves exclusively in-house.

**1610**

You represent some of the most wealthy and biggest businesses that are out there and that have thought a lot about energy needs, because you've come together. I guess my question to you, and it's probably to Mr Dickinson, is, if we needed to get power quickly in this province, how fast could your members come up with cogeneration activities or an ability to alleviate some of my problem?

I want to understand that in conjunction with, which group of your members is answering the RFP that Ontario Hydro has put out looking for alternative energy sources, and how much power might there be out there from your group?

**Mr Dickinson:** Well, there's some. Dow, for instance, has been trying get access to Hydro's transmission line across the Detroit River, because they have a lot of surface power that they could —

**Mrs Johns:** The turbine has not been used, I understand.

**Mr Dickinson:** Absolutely, and there may be others. I don't know that. I don't get into individual corporate situations.

I'd first like to address the comment you made very early on when you talked about the safety issue. It isn't clear to me that there is a safety issue. In fact, Dr Agnes Bishop said the standards that the AECB imposes are probably greater than are used internationally, which is quite reassuring, I think. We are not suggesting anything should be done that would give any cause for concern in terms of safety.

**Mrs Johns:** I'm not suggesting that safety is an issue. I'm just suggesting that lack of manpower could lead to a safety issue, and I think we've heard that a number of times through committee. At this particular point we all agree that safety is there. So really I'm just looking to see, if it closed down, how quickly your members could come up with power. I'm looking for alternative energy sources, which is part of the mandate of this committee. That's what I'm looking for from you.

**Mr Dickinson:** Right. The first thing I would add is that the assumption is they would have to come up with power. Why do we have to shut Bruce and Pickering "A" stations down as quickly as Hydro wants to before we've had a thorough review of alternatives? I believe Mrs Fisher yesterday talked about re-recruiting some of the staff that left in 1993.

**Mrs Johns:** I'm not suggesting they have to close down "A's"; I'm just asking for alternative power sources that your organization might have.

**Mr Dickinson:** We have not got much alternative power. Very few of my member companies have invested in cogeneration facilities, because that is not their business. Their business is either metals or oil or chemicals or whatever. It is not generating electricity. They look to the local utility to do that.

Another reason for this is because they are not allowed under the existing regime to sell excess or even transmit excess generation to other locations where they have facilities. Hydro won't let them do that. There's a major inhibition in place to prevent them from doing some of the things they might otherwise do.

**Mr Goldsmith:** I think you also have to understand that in a situation such as you're postulating, and I'm not sure we're close to that kind of a problem, where there is a shortage of energy in the province, the cost of that energy is going to go up because of the cost of fuel or whatever the reason. Given that we're in a situation where at current costs Ontario is not competitive in energy supply, you may see your shortage alleviated by the fact that the companies shut down and leave the province, taking their jobs with them.

**Mrs Johns:** We're all concerned about the jobs opportunity too, so I understand that. I just have met with Dow over the past and know they have excess turbine capacity and I'm interested in where that might lead us.

You were concerned about the CMO, the central marketer or the independent supplier, the wholesaler if you will, of power in the British experience. Can you explain how you would like to see that set up?

**Mr Dickinson:** What we have suggested to the Macdonald committee, and it's our formal position, is that a bilateral contract should be established. You don't really need to have the great infrastructure that is in place in Britain, where you have an exchange established, you bid into the central system, and the last unit supplying the market fixes the price of that market. That's a very complex infrastructure. There's no reason to do that. In fact, in California, where initially they were going to adopt the pool approach, they're now looking at a mix of bilateral contracts and pool, as I understand it.

So there certainly should be other opportunities examined in putting in place the system for the exchange of electrons between a supplier and a user.

**Mrs Fisher:** I don't think we're too far apart on some of the ideas. I understand where Mrs Johns is coming from when she looks at alternative, because if you look at the whole picture, you'd wonder where this is going to end up. But let's come back to your referral to my position yesterday, and I think I've done it every day. I'm glad somebody's noting it anyway.

**Mr Conway:** Don't despair.

**Mrs Fisher:** Thank you. I have a new fan.

**Mr Conway:** I'm on your team.

**Mrs Fisher:** That's great. We need them all.

Where we'll end up with this, nobody knows right now. I think it's a very fair question that was raised a moment ago. If you take a look almost from day to day and hour to hour within this room, there are new proposals and new ideas and so on, but let's go back to the private sector, of which you are part.

If everybody could run from their debt, like one might think we could do as a province with this, the answer would be the alternative sources and at a less costly basis to the consumer. I would imagine you would agree with that. But we're not faced with that luxury. I think as elected representatives we have a responsibility to not only protect the consumers, those including businesses, from price increases, but the provision and access to affordable electricity. Wouldn't you agree that's our job?

**Mr Goldsmith:** Yes.

**Mrs Fisher:** We'll get to the staffing issue then, because you did refer to it. The IIPA, as you have so professionally outlined in your response to this committee as well, suggests that the tools are there to be able to go forward and maintain a reasonably competitive market in the electricity exchange within the province. Would you agree? Can we compete with the system as it is and still meet your needs?

**Mr Goldsmith:** Absolutely. We've detailed exactly how in our submission to the Macdonald committee.



**Mrs Fisher:** It's funny that we see each other at this table today. I've actually been in the same room in the past as your representatives to the Ontario Energy Board rate hearings, where I didn't necessarily always agree that only large business should be considered for rates that make it appropriate for them to do operations.

**Mr Goldsmith:** I would say that our submission to the Macdonald committee lowered rates for all users.

**Mrs Fisher:** I appreciate that, because that certainly is an update in time from when I met you at the HR 22 hearings and people were concerned about major power users and were forgetting about the ones that might be budding new stars today had they been treated the same way. I say that with a little bit of reservation because I appreciate where you come from.

I also appreciate that in fact rates in the province in the past number of years have driven business away from Ontario, and I want to highlight your comment today with regard to that potential again. I absolutely agree with you. I feel that if we stray from our ability to maintain the rates where they're at, we are going to force further business away from the province and what we'll end up with maybe then is an overproduction again of electricity because nobody will be left to use it. That would be a very sad state.

**Mr Goldsmith:** And the people who are left will not have jobs and will not be able to pay for it anyway.

**Mrs Fisher:** There you go.

**Mr Goldsmith:** The concern is not just that we maintain rates at their current levels, but that we drop them by 25% to make them competitive. We believe that is possible, that it can be done with the proper competitive environment in the province and it can be done relatively quickly.

**Mrs Fisher:** Mr Conway, back on the second or third day of presentations when we had the senior corporate executive management board before us, was making suggestions. I heard you make a suggestion as well. I'm not so sure all senior management has to leave. Did somebody say — it was this afternoon — that maybe the wrong one went?

**Mr Goldsmith:** I think I made that comment.

**Mrs Fisher:** It was you who said that.

**Mr Goldsmith:** Yes, but I didn't say that the other senior management should leave. I said the board — which is the one, or should be, that generates the management culture — should have left. I didn't make any comment about any particular managers.

1620

**Mrs Fisher:** Then you think that all the decisions of the executive vice-presidency level, who make those recommendations so the board can or can't agree, aren't to be held responsible for this at all, that they're okay? It's the board that was supposed to be the only one accountable?

**Mr Goldsmith:** No, I was addressing the specific comments in the IIPA report relating to management culture and lack of accountability, lack of direction, lack of vision. All of those things have to start at the board

level. If the executive vice-presidents are making poor recommendations — if they are — then to me it is the board's responsibility to question those recommendations and request alternatives. If they're just accepting what they're being told at face value, then there is no accountability and I don't see any reason for the management to work any differently. They're doing what they're told.

**Mr Conway:** I want to pick up on that. I understand, for example, that Dr Kupcis's departure at one level makes eminent sense. He was running the organization and he gets this IIPA report, you know, "on my watch," and he goes.

**Mr Goldsmith:** Yet he was the one who commissioned the report and he was the only one in years and years and years to recognize that there was something that needed to be reported on.

**Mr Conway:** Exactly. Well said. Yesterday we had David Kerr, who's a very impressive guy, runs Noranda. He sat here for an hour and a half, and there was just this incredibly untroubled quality about him about what had gone on for four years while he was on the board. But be that as it may, I want to talk a little bit about the future.

I must say something. You might not like this, but I want to get it off my chest. Ms Churley was sort of touching on it. I said to somebody not too long ago that one of the things about the Ontario Hydro we've got in the late 1980s and the 1990s is that for me it represents the consensus of big government, big business and big labour. We were all in it together. We might talk as we do about Darlington now, but I remember that in 1981 Darlington was the centrepiece of an election campaign and the proponents of Darlington got a clear green light from the general electorate of Ontario, about which I have no complaint. But I think a fair observation has to be — and this touches to some extent on you people. Of course, none of you was here 25 years ago, and that's the great thing about this debate: Nobody's ever here when the chickens come home. But big government, big labour and big business were all singing out of the same hymn book, and for a lot of good reasons.

**Mr Goldsmith:** Are you suggesting that that decision was wrong?

**Mr Conway:** I think there were aspects of our energy policy that were imprudent. We ended up putting too many of our eggs in one basket. We've got people like Dr Hare telling us today that there were some design problems that simply weren't recognized. Al Kupcis was here a week ago saying he was beaver away inside Hydro giving them advice about the tubing issue, I think it was, and it didn't appear to be listened to.

**Mr Goldsmith:** But isn't that the problem?

**Mr Conway:** Well, listen, there are a number of things. I think one of the things about an energy policy is that you want balance, and our policy got imbalanced for whatever good reason.

But looking now to the future — and that's the interesting thing about the energy question. We were talking about the fact that by the time Darlington was finally

authorized, we had some very smart people up in Ottawa, ably led by Marc Lalonde, not a man to discount his own intellectual powers. They gave us the national energy program — remember that, 18 years ago? — the only lasting legacy of which appears to be Preston Manning. That was a package that, looked at now, doesn't hold much water. That's not unusual, apparently, in this energy debate, and that's why forecasting is so complicated.

In the United States, imported oil is the centrepiece of their energy program. You always want to ask yourself the question, how much of the Gulf War do you charge to the energy account?

As we look to the future, what I want you to tell the committee is, what are the ingredients, from your perspective, of good public policy that ought to inform the electricity reforms that are clearly coming, that will serve not just the interest you are here properly to represent and speak to, but will ensure that the taxpayers of Ontario will not be hung out to dry and that ratepayers everywhere in the province are going to get a fair shake in the new scheme of things? What are the basic policy ingredients, as you see them, that you would recommend this committee think about?

**Mr Goldsmith:** I think you need to recognize what has changed in the electricity regime in Ontario in, I would say, the last 10 to 15 years, without second-guessing any decision that was made in the past. Ontario Hydro has had a long and distinguished history of management of the electricity business in Ontario. They may have made a few mistakes along the way, but by and large it's been extremely good for the development of the province. It grew at a time when the only way to build electrical generation was through large mega-projects, through essentially a government-financed organization that could afford to build mega-projects and could afford, in some sense, to make a mistake and still be around.

What has changed is that the technology has advanced now to the point where you don't need large mega-projects to satisfy that same need. We've also had a decoupling of the growth in energy demand from the growth in GDP. They used to go hand in hand. In fact, there was a multiplier, I think, where electrical energy growth was faster than the GDP; now they're very close.

Those two things taken together mean that a different policy is more appropriate today than it was 20 years ago. That's why I won't second-guess what happened 20 years ago. I think those decisions were made with a different technology looking over our shoulders, with a different set of drivers.

To answer your question, "What does it take today?" it takes a corporation or group of corporations that is nimble, is able to respond, able to meet the needs of the customer. What does that mean? That means two things: competition and customer choice. You give those two things to the electricity business in Ontario and you will have accomplished all those other things you were talking about: equity for all customers, lower rates for all customers, a more responsive electricity system, a lower-cost system, a system that doesn't burden the province.

How do you do it? You dismantle the monopoly. You level the playing field. Introduce customer choice across the board. Allow the market to establish the price. We're not saying the price has to go down necessarily; we think it would go down now, but eventually it might go up. Encourage competition among as many suppliers as you can and have very light-handed regulation based on incentives.

**Mr Conway:** One of the centrepieces of Ontario energy policy for almost all of this century was the policy that sought to provide the greatest degree of self-sufficiency possible. That was one of the great appeals of nuclear; it played into that. We had hydro-electric resources, and that also reinforced that very important value. The impression I get now is that self-sufficiency is just not an issue. Nobody seems to think it is, and I understand how that might be.

But one of the interesting things for me is that most people, particularly most power generators you talk to, or potential generators of electricity, are assuming they are going to generate their power with natural gas most especially; that's the principal one. We have very little natural gas in Ontario. There's no question that it's going to give rise — particularly if most utilities east of the Mississippi and Red rivers all move at roughly the same time to the same kind of program, gas-fired.

I wonder if you've got any concerns about what kinds of potential stress that might put on the natural gas market in terms of demand, cost, transmission questions, intergovernmental and inter-regional tensions that have historically been there. Or should those simply be left to think tanks at hard-to-find universities?

**Mr Goldsmith:** I think a competitive market would work those things out for itself, but the issues you're raising are issues we raised in response to the 1989 demand-supply plan of Ontario Hydro, where they planned to build some 32 or 36 — I don't remember — gas-turbine generators over the next seven years or something like that. If you looked at that in reality, there weren't enough turbine manufacturers to make that many turbines in that time period and there wasn't enough capacity in TransCanada PipeLines to get the gas here. I think it involved a doubling of the TCPL pipeline just to service that need. So the concerns you're raising are very real.

**The Chair:** Thank you, Mr Conway. There is an agreement among the caucus leads that that will terminate the questioning for the day.

I would like to thank the Association of Major Power Consumers in Ontario for being present. Mr Goldsmith, Mr Dickinson and Mr Rodger, I want to thank you for your helpful testimony. I hope that you would make yourself available should the committee require you to come back for further evidence, that you might do so and accept our invitation, and if there is a written request, that you would be able to respond to that in kind as quickly as you could as well. We'd appreciate that. Thank you very much for being with us.



If I may speak to the committee for a moment, I'd remind you that the subcommittee will meet tomorrow morning at 8:30.

**Mr Conway:** I think the subcommittee should get a tent and go out to High Park and camp out.

**The Chair:** I'm sure we will be blessed with Mr Conway's presence. At 9 the committee will meet formally and we will continue. I want to remind you of the change of agenda, particularly for those who have been watching the meeting this afternoon, to let them know that there is a change in some of the scheduling.

At 9 am, the Municipal Electric Association will present. At 10 am, John Murphy, who is a board member of Ontario Hydro, will be a witness. At 11 am, Murray Stewart, president of the Canadian Nuclear Association, will be a witness. There will then be a two-hour break for members of the committee to attend to their household duties. At 2 pm, the Ontario Natural Gas Association will deputize, and then at 3 pm, for two hours, the Independent Power Producers' Society of Ontario will present, or whatever portion of the two hours is necessary to complete their evidence.

Is there any other business to be conducted?

**Mr Conway:** Yes. Perhaps Rob might help us with this. Somebody today mentioned — I just want to be clear. Have we had some written communication from Ontario Hydro telling us as a committee that they will not share with us certain legal opinions with respect to their obligations and their view of their obligations under the Power Corporation Act? I think I read in some of the

documentation today that that "Thank you and get lost" communication had been received. I just wanted to be clear.

**Mr Power:** Now that I'm back in my proper spot, we had requested from Ontario Hydro the legal opinion that had been referred to in one of the documents and had met with Hydro counsel because they had concerns about disclosing that, their rationale being that they are engaged in litigation with the Municipal Electric Association. We had asked them to outline their position in writing to us by this Friday, and at that time we would consider whether further action is required. You're correct in that one of the documents we've received today does indicate it has been refused. We didn't quite have to push it that far yet, so I wouldn't say we're at the refusal stage per se.

**Mr Conway:** I have great faith in the Chair and legal counsel and consulting staff, because I must say I have some concerns. This is an old story. I don't want to be unreasonable, but I think the committee has some obligations to meet.

**The Chair:** Mr Conway, may I give you comfort? We'll raise the matter with the subcommittee in the morning, and the Vice-Chair will be ever vigilant to ensure that we deal with this. I give you comfort to remind you that the committee does have authority to execute its will where appropriate.

Is there any other business before the committee? Then until, for the subcommittee, 8:30 in the morning, and for the committee 9 o'clock, we stand adjourned.

*The committee adjourned at 1634.*





## CONTENTS

Wednesday 22 October 1997

Ontario Energy Board .....	H-205
Ms Marie Rounding	
Mr George Dominy	
Dr Roger Higgin	
British Energy.....	H-221
Dr Robin Jeffrey	
Mr Robert Armour	
Dr Kenneth Hare.....	H-235
Association of Major Power Consumers in Ontario.....	H-243
Mr David Goldsmith	
Mr Arthur Dickinson	

### SELECT COMMITTEE ON ONTARIO HYDRO NUCLEAR AFFAIRS

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Mr Derwyn Shea (High Park-Swansea PC)

#### Vice-Chair / Vice-Président

Mr Monte Kwinter (Wilson Heights L)

Mr Sean Conway (Renfrew North / -Nord L)

    Mrs Barbara Fisher (Bruce PC)

    Mr Doug Galt (Northumberland PC)

    Mrs Helen Johns (Huron PC)

    Mr Monte Kwinter (Wilson Heights L)

    Mr Floyd Laughren (Nickel Belt ND)

Mr John R. O'Toole (Durham East / -Est PC)

    Mr Derwyn Shea (High Park-Swansea PC)

#### Also taking part / Autres participants et participantes

Ms Marilyn Churley (Riverdale ND)

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Ms Donna Bryce

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    Mr Richard Campbell, consultant

    Mr Robert Power, legal counsel; Mr Adam Chamberlain, legal counsel



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H-10

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of Debates  
(Hansard)**

Thursday 23 October 1997

**Journal  
des débats  
(Hansard)**

Jeudi 23 octobre 1997

**Select committee on  
Ontario Hydro nuclear affairs****Comité spécial des affaires  
nucléaires d'Ontario Hydro**Chair: Derwyn Shea  
Clerk: Donna BrycePrésident : Derwyn Shea  
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## LEGISLATIVE ASSEMBLY OF ONTARIO

## ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

SELECT COMMITTEE ON  
ONTARIO HYDRO NUCLEAR AFFAIRSCOMITÉ SPÉCIAL DES AFFAIRES  
NUCLÉAIRES D'ONTARIO HYDRO

Thursday 23 October 1997

Jeudi 23 octobre 1997

*The committee met at 0920 in room 151.*

**The Chair (Mr Derwyn Shea):** The committee will be in session. We are running just a little behind schedule.

The subcommittee met earlier today and has been dealing with the itinerary of the committee for the next week or two. It has agreed that it will continue with its visit to the Bruce. That will take place on Wednesday and Thursday and public hearings will be held on Wednesday evening and Thursday morning. We will detail that in greater depth before the day is over for members of the committee so they'll see where we're at.

There is some discussion about the first of next week and in that regard I will turn my attention to Mr Galt.

**Mr Doug Galt (Northumberland):** Looking at the schedule, tentatively put on the schedule had been going to Pickering and Darlington in the third week; in other words, the week of November 3. In view of the fact there's a looming strike by the teachers, and a possibility of the House being called back dear knows when, I think it's extremely important that we get out to all three communities. I'm suggesting that next Tuesday we spend the day touring the plants of Pickering and Darlington. I think it's very, very important that this committee have the opportunity to see the bricks and mortar, see how they operate, see the staff, visit with the staff and make sure that is accomplished, as well as going to Bruce next week. We can continue to use the Monday afternoon and the Monday evening for the purpose of receiving delegations.

**Mr John O'Toole (Durham East):** Out of respect for the member for Northumberland, I would have to raise an objection to spending one day at two very important facilities where the conditions and the situation are somewhat different than Bruce. I don't want them to be treated as one unit. It's in Durham and I represent the people of Durham. Not to be in contradiction with Mr Galt, I think the issues are different and important and should each be given a day as originally agreed. That's my opinion and view on the issue.

**The Chair:** The outline of a tentative schedule that's been laid before us is one that you find some concurrence in.

**Mr O'Toole:** Yes. If we'll have a day at each site, I'm completely on side.

**Mr Floyd Laughren (Nickel Belt):** I want to speak in support of Mr O'Toole's concerns. I think it's terribly important to go to Bruce. I'm convinced by others' arguments, not my own quite frankly, that the other areas

need to be treated the same way Bruce is, where you go, have a visit and then have a hearing in the community for people who want to express concerns to the committee. I am and always had been in support of that original tentative schedule and I think we should stick to that. There are important briefings that we need to get through next Monday and Tuesday and then I think it's a good schedule for the week of November 3 to do the Darlington-Pickering tour.

**Mr Sean G. Conway (Renfrew North):** I just want to repeat what I said in the subcommittee, that I think the original plan for two days at Bruce next week and then the week following we would go to Pickering and Darlington is, all things considered, the better plan. So I would agree with Mr O'Toole and therefore not agree with Dr Galt. I'd like to stick to our tentative schedule, which is next week to Bruce, and the week following, Darlington and Pickering.

**Mrs Barbara Fisher (Bruce):** I absolutely support the position of Mr O'Toole. I'm the recipient of a job loss site. He's the recipient of the pickup. All through the hearings it's been very clear that there could have been different interests. As well, my goal as a member of this committee is to ensure that all of Ontario Hydro is fixed this time, not just that respective to the Bruce. I personally feel that I need to gain exposure to the Pickering and Darlington sites. They are different. We've had panellists come before us time and time again telling us of the differences and we need to review those.

I would make this request, that we not only, in deciding this morning, assure Mr O'Toole and all of us that if we say we don't have it next week because next week was supposed to be the prescribed week, then in fact we make not only the commitment but the promise that it won't be slashed off the schedule somehow. If it means we have to work all night to make this happen, I mean four consecutive nights to pick up the extra hours, we made the commitment in the beginning that we would do that, but it's imperative that we go to all the sites.

**Mr Galt:** With respect to what Mr O'Toole is saying, the reason I was bringing it forth — I hadn't had a chance to discuss it with him earlier and maybe I should have — is that my concern was really on his behalf and his community's. If a teachers' strike does occur and if the House has to be called back and therefore it may be bumped because of that, with the House sitting, and we may not get out there prior to this report being developed,



and if he's comfortable with that and it's on record, then I'm comfortable with that.

I was looking out for the members in that area and concerned about a possibility of this committee not getting out there to tour prior to this report going in. With what's sitting on the horizon, that's a very distinct possibility; I don't think there's any question. If he's comfortable with the fact that this report may go in prior to our being able to get out there to tour that facility, then so be it. I'm not about to object to that. I was concerned that we might not get out there and he would be put in a very awkward position by the fact that we hadn't visited the plant in his area.

**The Chair:** Can I be of help? Maybe I can help there.

First of all, if I can guide the committee in this way, we have a tentative schedule that was set up for us, I think we will recall, and it indicated that for next week we would do two days for Bruce and then the following week there would be two days, so that each site was discretely handled, including deputations. That seemed to be sitting well, although I do recognize, Dr Galt, that you would continue to say, "I'm concerned about that part of it," and you have kept that consistently on record.

Two things I want to remind the committee about: First of all, whether the House is recalled or not is not within our domain. That is something we'll deal with if it happens, and if it happens, then as Chair of the committee I'll make every effort to make sure that we reschedule so that the House leaders understand the significance of our task, the importance of the visits that we wish to make, and I'll tie that to the December 1 deadline.

We have some measure of comfort because, as you will read the minutes that went through Parliament, we have a right to extend beyond the first, if we need to. We are trying to ensure that the first is our deadline, and this committee has been very diligent at keeping to that schedule. But if we have to go beyond that because of circumstances that are certainly not within our control, then I think none of the House leaders would be concerned about that. I think this committee would still want to be sure that it has taken due diligence for whatever it's doing, and that includes the appropriate visits. I think we all want to make sure that all three sites receive appropriate treatment in terms of visitations and hearings from this committee.

Does that help at all? Is that a reasonable, common-sense approach? Then you've made your point and Mr O'Toole has, and may I suggest it might be helpful if your motion then were taken off the table.

**Mr Galt:** I didn't make a motion.

**The Chair:** I took it that you had, but I will —

**Mr Galt:** I was just speaking on behalf of it, and I'll certainly bow to Mr O'Toole, being the member who represents that particular plant. As long as he is comfortable, I'm certainly comfortable.

**The Chair:** Mr Kwinter, you wanted to raise something?

**Mr Monte Kwinter (Wilson Heights):** I was just going to say exactly what you said.

**The Chair:** We are in complete accord.

**Mr Kwinter:** Complete accord.

**The Chair:** Clearly, that chat I had with you yesterday has worked wonders.

**Mr Kwinter:** I just wanted to make the point that the December 1 deadline is a target and we hope to meet it, but if extraordinary circumstances intervene, then we're going to have make some sort of an adjustment. I don't think there's any concern.

**Mr Galt:** If Mr O'Toole is comfortable, that's great.

**The Chair:** Thank you, Mr Vice, I appreciate those words of support. We are in agreement. There is no motion on the floor, so we will continue with the tentative schedules that we have before us that now are a little more firmed up.

**Mr Conway:** Since Dr Galt has got urgency on his mind and since he's also the parliamentary assistant to the Minister of Energy —

**Mr Galt:** Wrong.

**Mr Conway:** Wrong. It's environment, right?

**Mr Galt:** Yes.

**Mr Conway:** I thought maybe I might ask the parliamentary assistant to get that white paper to this committee, like today, since urgency was on some people's mind.

**The Chair:** Thank you, Mr Conway. That was out of order, but nevertheless it was well executed.

0930

## MUNICIPAL ELECTRIC ASSOCIATION

**The Chair:** May we turn our attention to the first deputation of the day and that is the Municipal Electric Association. My schedule has Kent Edwards and Tony Jennings who are appearing before the committee as witnesses. For the purpose of Hansard, would you be good enough to identify yourselves? Then, if you'll proceed with your deputation, we will proceed with questioning by caucus in rotation. Welcome and thank you for being here.

**Mr Kent Edwards:** My name is Kent Edwards. I'm president of the Municipal Electric Association and general manager of the Windsor Utilities Commission. With me is Tony Jennings who is chief executive officer of the Municipal Electric Association. I want to say at the outset that I'm pleased to be here. I'm also pleased that the committee is sitting on this issue. To begin our deputation, I'll call on Mr Jennings to give a brief profile of the MEA and then I'll carry it from there.

**Mr Tony Jennings:** Mr Chairman, I will do that. Can I get some guidance from you on how we're going to handle time? We had assumed about an hour from your schedule.

**The Chair:** If you would assume you have slightly less than an hour, what I'll try to do is use some discretion as Chair to truncate where I can and massage the schedule a little bit. I know the committee will give me its support as I try to do that, what's convenient.

**Mr Jennings:** Our expectation was that most of the time should be your ability to ask questions anyway.

Let me just give a little introductory background about the association. Many of you are already aware of it, but very quickly, we represent 306 municipal electric utilities

throughout the province that have a long-standing history in delivering electricity within their communities. They range from very large to very small. They are in all parts of the province. They represent somewhat over 70% of Ontario Hydro's load, 70% of Ontario Hydro's business, and look on themselves as the primary customers of Ontario Hydro, approaching \$7 billion in sales. They, in turn, serve about 2.8 million customers of all sizes and kinds. They ask the association to speak on their behalf and on behalf of their customers of all kinds.

The MEA, to a large extent, acts as a cooperative providing services to its members and allowing them to do things jointly, like setting standards and developing approaches, doing research on distribution. Some of that used to be done in cooperation with Ontario Hydro. They discontinued that a while ago and we've had to expand our activities in that regard to pick that up.

But probably more relevant to you today is that the association represents the municipal utilities with Ontario Hydro, with the energy board, with the government and with others on a variety of broad issues for them and their customers. It's a non-exclusive representation. Some of our member utilities will decide to appear on their own. They may have a slight variation or a significant variation from the position the majority take. But on most things we do represent them and I think some of that will be relevant to your discussions today.

**Mr Edwards:** There are several areas where we may be able to bring some information to the committee. As Mr Jennings notes, we are the municipal utilities; that makes us in the wires business in the local communities across the country. It does not make us nuclear experts. However, I think the environment this crisis has developed in should help the committee. I want to touch on a number of areas. Basically, I'll pick up on a little bit of the relationship of the utilities to Ontario Hydro, provide you with a view of what went wrong from our vantage point — I understand you have been probing that — look at some of the customer issues around the finance and nuclear out of the August announcements, briefly on the IIPA and, finally, with some recommendations.

To begin with the relationship to Ontario Hydro, as you may know, Hydro was initially set up as a trustee of the utilities, and the Power Corporation Act still carries obligations of Hydro to the utilities. They are also, at the same time, our regulator. They exercise that over our rates and over our capital budgets. At an operating level, the relationship is primarily at the interface of where we take power from the corporation.

The corporation professes itself to be our exclusive supplier. We have some difficulty with that, but we're working through that. The operating interface is a working level. It does not reach into the Hydro operations as far as the nuclear or any of the other generating supplies are concerned, except in our corporate proceedings. On those issues, the corporate issues, the larger industry issues, of late our formal route to communications with Hydro has been through the Ontario Energy Board. There will be a thread of that and there are some briefing papers that have

been circulated to the committee on some of the representations to the Ontario Energy Board.

In addition, as Mr Jennings notes, the Municipal Electric Association on behalf of its members often carries issues common to the industry through to government, and I may touch on some of that as well.

A brief history of the relationship I think is in order. I'll keep it very brief, to the last decade. Up until the late 1980s, early 1990s, Hydro was primarily in construction. At that time, they were into their demand-supply plan, you will recall. They were looking for environmental assessment on new nuclear plants and combustion turbine units. They were encouraging utilities to enter into non-utility generation, as they were with the private sector. I'm sure Mr Laughren remembers Falconbridge. There were others around the province and several within the utilities. They were also advocating demand management programs in order to address the perceived deficiency of supply that they were forecasting at that time.

A couple of things came out of that. Particularly out of the non-utility generation issues, it became apparent that independent power could compete quite handily with Ontario Hydro. When that became apparent, Hydro began to realize that their rates were in fact too high to be competitive. What transpired became known as kind of the death spiral. Utilities or others would enter into agreements for independent power, leaving the rest of the customers, their neighbours, to pay for the assets of Ontario Hydro.

We recognized that with some reluctance because it seemed to change in the matter of a day, I believe. Ontario Hydro's forecasts were turned around. They were now projecting surpluses instead of deficits and the programs were all withdrawn and the demand-supply plan collapsed. We proceeded from there with the Ministry of Energy to develop an agreement for non-utility generation and linked to that was a partnership agreement with Ontario Hydro to set the framework for the relationship of the utilities to Hydro on an ongoing basis.

Unfortunately, those agreements were never followed. I think after the ink was dry, they were filed and that was the end of that exercise. Our recourse since that time has been, as I say, through the Ontario Energy Board. We have not seen Ontario Hydro being particularly agreeable to following the recommendations of the energy board in recent years, which has led us to raise issues to a higher level of government, some might say to pester the government from time to time about certain issues. The government has been somewhat reluctant to interfere in Hydro's affairs. That has left us to use the courts as a final recourse. I paint a picture of a rather deteriorating relationship there.

#### 0940

If I put that in the context of what you've been probing, of what went wrong, I go back to the construction period when Hydro was focused on the growth of the generating assets, trying to meet the growth of the Ontario economy. All of the industry focus was then on activity and we were quite in step with them, I think. However, as time passed,



about the same time as the demand-supply plan issue, it became apparent that the forecasting was not correct, that the continued growth we'd seen in the past wasn't going to go on into the future.

The reasons for the miss in the forecast I don't think need to be explored in great depth, whether it was the change in the economy or a shift in energy use as the gas markets were deregulated. In any event, the load flattened out and at the same time we were faced with Darlington coming into the system — a very major, major new plant.

Darlington was a little bit like the elephant in the belly of the snake. It pushed the rates up very quickly, caused the issues that I referred to, the rates to be too high to compete with alternative sources of energy. Hydro then shifted its focus from one of construction and growth to one of finance, cost control and downsizing. What we see coming out of that is a reduced emphasis on preventive maintenance, more of a tendency to fix things when they're broken, and I think we see that in the IIPA report.

There's a further step beyond that where, following the global trend to deregulation of the electric industry, Hydro entered into a mode of positioning itself for competition, and while they espoused a mode of competition, in fact in outward appearances and practices they adopted many protective kinds of policies. They focused their competition, in some cases, on our membership, our utilities, and we found ourselves to be a competitor to Hydro as opposed to a customer, very much alienating some of the utilities because at the same time Ontario Hydro was regulating them. There was an emphasis at the corporate strategic level on general corporate survival, I would say, at this point.

I think our bottom line on that is that the corporation had really become very large and senior management had become very distant from its operations.

Then in August we received the report; I think you've been referring to it as the Andognini report. There are some customer issues that come out of that obviously in finance and some in nuclear. In finance, this additional \$5 billion to \$8 billion was of course devastating news. If I put that in the context of a year's total bill for Hydro, it's a 50% to 80% increase. Hydro has characterized that as later. Pay me now or pay me later, our customers will still have to pay that bill, if that's the solution. That's at a time when rates are already too high and I think Ontario's competitive position and global position in industry are severely threatened.

We're highly sceptical of the nuclear recovery plan and we'll be recommending that you do proceed with some further review of that plan.

On the nuclear side, let me put the concern for safety and environment aside. It's a very critical issue and I'm sure it's going to require more exploration. But we've been positioned that the nuclear had an enviable track record. It was world-class leadership. We have seen the Atomic Energy Control Board licences continue to be granted. Ontario Hydro has continued a hard line on alternative supplies and in opposition to demand management.

This did come to us as a concern. We raised some of these concerns at the energy board and you'll find some of these issues in the briefing notes. We were concerned of course with Darlington — the cost, the way it was entered into the rate base, the impact it had on the general economy.

We were concerned about the power of the unions in the nuclear division. The unions had the power to shut down Ontario Hydro's nuclear division, which basically turned the lights off in the province. There was a real imbalance of power at the negotiating table that we wished to have addressed. The energy board agreed with that position and made recommendations to government and the government chose to take no action.

We also have had a thread through recent energy board hearings probing the nuclear operating and management budgets and at the 1994 hearing, which was the last hearing that had the scope to probe into these matters, we noted in our final argument: "Due to the unforgiving nature of the nuclear technology, Ontario Hydro must be careful not to put too much pressure on Ontario Hydro nuclear budgets. Loss of use of the nuclear assets will impose a cost on ratepayers far in excess of any short-term rate savings which may be realized by holding too tight a rein on nuclear costs."

That was in 1994. The Andognini report, the IIPA, had some disturbing information in it. Let me say that we've only been able to see the summary information, have not got into the information below the surface of that report, and I don't profess to have the knowledge or competence to deal in a deeper depth. However, in the summary there are some disturbing things.

First, I note that the report starts with an identification that the business plan is out by \$3.6 billion before the IIPA recommendations begin to kick in. That implies to me a culpability that cuts two ways. Management was apparently setting productivity targets that were unrealistic and the operating divisions were not challenging those targets, were accepting them and ignoring them, it would seem to me. I guess perhaps, as Mr Conway so eloquently put it, more than Mr Kupcis perhaps should fall on their sword. We're not out here for more blood, but we do want to see some competence and accountability brought back into Hydro's operations.

Also, the report refers to several of the apparent problems in the plants. A lot of those problems are in the non-nuclear parts of the plants. The only reference that I have picked up is the pressure tubes within the calandria. Other components, such as the boilers, steam generators, cable problems, these are components that are common to all generation or have parallel appurtenances in another generating plant's non-nuclear and it leads us to have the concern of whether these same issues exist elsewhere in the corporation. Does that say that some of the non-nuclear generators, if subjected to a similar assessment, should also be laid out?

There's some comfort that the findings confirm what the AECB has been saying, that the plants are safe, that the technology is robust, but there's also the concern that

improvements are definitely needed. It points to the problem of management, and I think that problem is a top-down problem consistent with the environment of the time.

**0950**

In the bottom line, I would say the summary reports we received, on which the Hydro board made their judgement, their decisions, that there is not enough information there to make that kind of decision that was made — in the matter of one day to spend \$5 billion to \$8 billion. I really do believe that decision has to be revisited. In looking at it, and as I say, this is a summary view from a non-professional position, I would certainly not feel comfortable in throwing out all of the options that were presented in the IIPA.

That leads me to some theories on this. I know you're all familiar with and have been briefed on the Macdonald report, the competition that's pending in the industry and the white paper we're going to see soon — and I repeat: soon. You've already probed the issue of privatization, the issue that perhaps the corporation is positioning itself as being incompetent in order that it might precipitate privatization. I would go down another avenue, suggesting that this also would serve to enhance stranded assets in a deregulated industry.

A further view or theory is that the nuclear business, as a must-run, base load business, will continue and will be price-cap regulated. This activity would make sure that the price cap is as high as possible.

In the broader context, Ontario Hydro has pictured itself as being a competitor in the North American market, despite tie-line constraints, despite the impact of market power in Ontario, where they would dominate the market here. The theory here would lead that by Hydro's mismanagement causing the debt to increase, threatening the security of the debt will cause the decision-makers to hold Hydro together in order that they might proceed on that North American plan.

I bring these to you. They are simply theories, but it raises a lot of scepticism with Ontario Hydro at the present time. We wonder whether they're making their decisions on a going-concern basis or whether they're positioning themselves for a competitive market, a deregulated market, a strategic position. That in itself is reason to go back and review the steps that have been taken.

I'll wrap up with some recommendations. I think we all want the lowest-cost safe recovery plan. We question, though, that seven nuclear units have to be laid up at the same time. Certainly we encourage the committee to get a second opinion on that, and that second opinion should go beyond a review of the finance, the numbers; it should go into the actual nuclear operations and recommendations.

Upon reflection of the decision, if it's still determined that the A units, either Pickering or Bruce or both, have to be laid up, then we would suggest that any new capacity that's going to be introduced into the system be introduced in competition with Ontario Hydro into a competitive market. I know a central marketing operation is being established. I think it should probably be spun off and it

should become the vehicle for purchasing additional power, not the Genco, the John Fox unit.

Following on that, if Bruce and/or Pickering are laid up, the decision for them to return to service should not just be the environmental licensing requirements. It should also be a true market test against alternative supply options before those are brought on.

The final recommendation is probably the most substantive. I think the changes that have to be made should fit into the new competitive environment that we expect in the very near future. In that line, we would suggest that the nuclear operations be severed from Ontario Hydro, be given a separate governance, be set up as public corporations, be subject to price-cap regulation that's binding.

A focused separate nuclear organization I think is the only way that we'll not be back in a committee hearing again in a few years. If we are able to harness the resources of Ontario and those communities that are so closely entwined with the nuclear business and focus on superior performance, safety and reliability, I think the asset there, this robust technology, has the greatest possibility of coming back to service the province in the way it was originally intended.

I'll conclude my comments there, and we're looking for questions.

**The Chair:** There are a number of questions. We'll do five-minute rotations to begin with and see how the time spans out. My counsel to each caucus would be to keep the questions very concise so we can elicit as much information as possible in a short period of time. I'll begin with the Liberal caucus.

**Mr Conway:** Thank you, gentlemen. One of the key cost components of the so-called nuclear recovery plan that the Ontario Hydro board agreed to on August 12 has to do with the replacement power that will be required as a result of the laying up of seven of the 19 current reactors. What is the view of the MEA about, first of all, the availability in the short and intermediate term of that amount of replacement power and what would you have to say about Hydro's estimated cost of approximately \$2.5 billion for that replacement power?

**Mr Edwards:** I think we would have difficulty putting figures to the cost of replacement power without doing some further research. What does concern me is that if the reliability problems are universal across the organization, across the supply system, then we're putting a tremendous reliance on the balance of the generation by shutting down as many as seven nuclear plants. The reserve margin that's left is very narrow compared to what we're accustomed to and we're dealing at a time when the generating units are portrayed as being rather baulky and unreliable. I would have a real concern that we would be in trouble if they proceed with that plan.

**Mr Conway:** Should the committee be concerned that the non-nuclear plants that Ontario Hydro has and will be relying on to an increasing degree — the recovery plan clearly anticipates firing up the Lennox GS, converting it to gas, and relying to an even greater extent on the fossil



plants like the thermal plants at Lakeview and Lambton. Are there any concerns at the MEA about the ability of the thermal plants to take over to such an increased extent for, say, the next three to five years?

**Mr Edwards:** I think the concern is the general concern that I've portrayed.

**Mr Jennings:** If I can jump in on that, we haven't got any good basis for challenging Ontario Hydro's figures. The problem is, on the face of them, they look credible but past history has not suggested that we should automatically accept them. I think you folks have a real challenge in front of you and we'll do our best to be helpful on it.

What we're not getting is a market test. There is a request for proposals out for a two-year supply of energy, but two years isn't a long enough time for anybody to do something significant. It goes back to the issue of what kind of environment we're moving towards and in what context you evaluate it. If we knew what was going to be done around the issue of stranded assets, then you would use different strategies and different ways of testing. As Mr Edwards said, one way to do it would be to have somebody independent of Ontario Hydro calling for hard proposals to resolve some of these problems.

**Mr Conway:** On that subject of the private sector looking at going forward now to develop new facilities, new capacity to meet the new electricity demand, I take it, Mr Edwards and Mr Jennings, that there wouldn't be very many in the financial community or in the private power community who would be interested in developing a greenfield site, a new site, for, say, gas-fired electricity, with only the offer of a two- or three-year contract from Ontario Hydro. Would that be a fair assumption?

**Mr Edwards:** I think so. What that RFP really generate is energy from capacity already available. The amount of that around the province I think is rather limited. Likely the majority of the response will be from out of the country.

**Mr Conway:** But most people would not be very willing to commit new capacity until they had some sense of what the new world of electricity reform is going to be like. Would that be fair?

**Mr Edwards:** I think it is. New capacity will not be entered into the system until there is some assurance that there will be access to the markets at least. Until the markets are opened up, I think the probability of new capacity from the private sector, without long-term, hard contracts like we saw in the past, will not materialize.

**Mr Conway:** In your submission on electricity reform, which I found very helpful and I have some knowledge of from our previous discussions, you indicate that from the MEA's point of view, Ontario Hydro should be vertically unbundled, it should be disaggregated in ways you talked about a moment ago. You called for a provincial electricity regulator. On the distribution side, do I understand your position to be that Ontario Hydro retail should disappear?

**Mr Edwards:** Absolutely.

**Mr Conway:** And that all distribution should be left to MEUs with clearly defined franchise areas?

**Mr Edwards:** Yes. I think we're very much in tune with what was recommended in the Macdonald report of shoulder-to-shoulder utility.

**Mr Conway:** I notice you say, therefore, that you want a provincial electricity regulator but that regulatory control over the distribution function should reside with local commissions. I find that a bit peculiar, because that appears to me to be a different and lighter variety of regulation than you contemplate for other parts of the electricity business. It appears to me that you're suggesting there be local monopolies in terms of distribution.

**Mr Jennings:** If I can jump in on that, I think you heard from Mr Franklin, the past-president of Ontario Hydro, something very similar to what we've proposed. The key is getting competition in generation. That's a position that's taken virtually everywhere in the world. That's where 70 cents on the dollar is. That's where there are some technology changes that —

**Mr Conway:** But we heard from the OEB yesterday, Mr Jennings, that there should be regulation of the monopoly parts of this business.

**Mr Jennings:** And we would agree with that. The provincial grid, which we believe should be a separate corporation, should be provincially regulated. We believe the regulation, as is done in the 2,000 municipal utilities in the US, should be in the hands of the local people who are served by that monopoly wire's function locally. We don't think it's different.

**Mr Laughren:** Welcome, gentlemen. You touched on one area that some of us are very concerned about and that's the white paper that the government is talking about bringing forward. As a matter of fact, they promised to bring it forward but some of us are quite frustrated that we haven't seen it yet. I don't know how you judge the recovery plan without knowing what's in that white paper. When you say you have serious questions about the wisdom of laying up the seven reactors all at once as you move into that recovery plan and the Andognini recommendations, I'm wondering what you see as an alternative to laying up those seven reactors.

**Mr Edwards:** As I said, I don't think we're in a position to say that's not the answer. We're simply sceptical of what has been said, of the level of research that's gone into that recommendation. I know it was developed under a pressure timetable. There was a tremendous amount of judgement, you can see, in the summary documents and coming to the conclusions that were reached. There were options tabled there. I think one of laying up the Bruce units only certainly had a number of things to commend it in the sense of less coal use, less money up the stack, if you like, and a higher margin of reserve. It was more challenging in the sense of resource. Maybe we have reached the point that we should take those kinds of challenges in order to maintain the prices. We're just not comfortable to say *carte blanche* that seven units should be shut down.

**Mr Jennings:** Let me take a different approach, and it relates to the two issues. We've been arguing among the staff in the last couple of days how we should be reacting.

If the white paper or if this province adopts something close to Macdonald's recommendation, where the past investment stranded debt etc is moved off and placed in some form of a charge which all customers are going to bear on an equitable basis, then an option which hasn't been considered by Ontario Hydro and is allowable now under the Power Corporation Act would be to simply allow the local utilities to look at local generation options themselves. That gets over the two-year window that Mr Conway was talking about in terms of investments etc.

There is a contractual issue that, as was mentioned, we're in court around, about whether there is an exclusive supply thing, but that flows from the contracts, not from the act. So that's a discretionary decision in Ontario Hydro's mind.

If we're going to keep the current pool, then our position has been to assist Ontario Hydro to make sure the flow of money goes to them to pay down those past debts etc, but we can't make a decision on whether that's a good option to consider until we know where we're going.

The material you've been asked to review, as we read it, looks like it is an assessment on how best to fix Ontario Hydro's assets. If I were holding stock in the company, I would be comfortable with that approach because they've looked after the company. Whether that's best from the customer's standpoint is not the kind of language we see in any of the reports, and that's our concern.

**Mr Laughren:** Just so you know, the committee is seeking independent advice in that regard as well. We don't have it yet, but we are seeking that.

**Mr Jennings:** I appreciate that.

**Mr O'Toole:** Thank you very much for your presentation this morning. I'm rather anxious to meet with the MEUs. I'm quite familiar with their role and function. Just in a very simple mode, I heard earlier on in the briefings that there's an old tradition with the formation of Ontario Hydro that the MEUs feel that they have a primary ownership role. Could I clarify that fairly simply or is it that easily dismissed?

**Mr Edwards:** Let me try. I don't want to get into a great debate on it.

**Mr O'Toole:** Is it a yes or no kind of thing?

**Mr Edwards:** Yes.

**Mr O'Toole:** Do you have an ownership?

**Mr Edwards:** The simple answer is yes.

**Mr O'Toole:** So you owe us \$30 billion, then. I've finally found the owner.

**Mr Jennings:** And unfortunately we've been paying it.

**Mr O'Toole:** Where is the money? Anyway, I hope not to trivialize the argument. It's clear that's the position. It's a legal challenge. You will pursue it some time.

**Mr Jennings:** Mr Strong used to say we've never exercised our ownership and that has been a problem. We certainly have been paying for it.

**Mr O'Toole:** We've all paid, I suppose.

**Mr Jennings:** That's right.

**Mr O'Toole:** I agree entirely with much of what has been said here with respect to the fact that the role of the government is to guarantee safe, reliable and affordable

power for all Ontario. Given that that's the mandate of the government, I suspect the Power Corporation Act and other kinds of legislative framework ensure that happens. Are you happy that Ontario Hydro has kind of conformed to two out of three of those things? Affordable is the question, but reliable and sustainable and safe? Is it safe and is it reliable? That's the question.

**1010**

**Mr Edwards:** We have no indication that the safety is compromised. Reliability, we have some concerns; sustainability, we have some significant concerns.

**Mr O'Toole:** Affordable is one we all have a lot of —

**Mr Edwards:** We know that right now we would not say that the price of hydro is low enough. I think it's not affordable.

**Mr O'Toole:** We heard from the large consumers yesterday, who are kind of your competitors, I suppose.

**Mr Edwards:** Absolutely not.

**Mr Jennings:** No, many of them are his and our members' customers.

**Mr O'Toole:** They basically want about a 25% decrease to be competitive with the Windsor-Detroit kind of scenario. They think we're way out of the park on price.

I want to move along a little more quickly so I can use appropriately my whole time. With 60% of the power being generated from nuclear, do you believe that nuclear should form the base load in the system?

**Mr Edwards:** That's how it fits into the system.

**Mr O'Toole:** Yes, I know.

**Mr Edwards:** It is the base load and it should be.

**Mr O'Toole:** That's what the IIPA is really saying. It says, okay, let's get in and maybe we can do this base load with fewer actual reactors, maybe fewer than 19. That's what we're going to get to. That is your position, that it should form the base load kind of thing?

**Mr Edwards:** Yes. That's the way they're constructed. That's the most economical way to operate them.

**Mr O'Toole:** And you want that to be in public ownership.

**Mr Jennings:** Let's be clear on what the question is, if I may. If you've got nuclear, it is a base load operation. Whether it is the right way to do base load is a different issue.

**Mr O'Toole:** That's good you clarified, because I'm asking, is it the most reliable, environmentally friendly, all those reasons we made the choices 20 years ago that we made to form the base load?

**Mr Jennings:** As you may recall, one of the reasons you made the choice in the past was the data that were given which suggested that it was going to be so cheap you wouldn't bother metering it. It hasn't proven out that way and that's where our scepticism is. We share your concern about how you evaluate that without relying on the people whose forecasting has not been accurate in terms of costs etc in the past.

**Mr O'Toole:** The Macdonald competitive framework really suggested much of what you've endorsed this morning, that the nuclear should be held in public



ownership, such that there is a more open, accountable process.

**Mr Jennings:** With several competing nuclear plants.

**Mr O'Toole:** Yes.

**Mr Jennings:** If you had a board of directors over Bruce, for instance, in Ms Fisher's riding, or over Darlington or over Pickering, closer to the operation, I doubt you would have seen what has developed. You wouldn't have the distance between senior management and the board that would allow a business plan which they are now finding themselves is unattainable.

**Mr O'Toole:** Mr Andognini said exactly the reverse. He said under Mr Strong's direction he had set up competing forces which led to no standards and regulations with respect to overall controls. So which is it? Is it the large centralized control or is the plant competing on control?

**Mr Jennings:** With respect, Mr O'Toole, what he was talking about was decentralizing within a large organization with a single board of directors at the top and a single senior management at the top. That's quite different from having a number of smaller corporations, such as Macdonald recommended, for competing entities, where senior management and the board of directors, the people who are theoretically standing back from the operation, are going to be closer to the ground and more able to assess what is being reported to them.

**Mr O'Toole:** I think I understand your point. I have limited time. One more question on MEU amalgamations.

**The Chair:** Thank you, Mr O'Toole. We're going around one more time, but very quickly. There will be time for one question for each caucus.

**Mr Conway:** My last question will be, you know this committee has a limited time in which to do its work and it's been given a specific frame of reference. Considering that, from your perspective and from the perspective of the millions of electricity customers you represent, what, in the public interest, should this committee be recommending against the terms of reference that have been provided? What one or two things could and should this committee do that in your view would give some comfort to your customers?

**Mr Edwards:** I think the recommendations we tabled with you really addressed that question. We want a more thorough review of the options selected. We think it was presented too quickly and judged too quickly. Further, we think that the nuclear, which is the base load, which is going to be the must-run power if it's going to continue to supply the province, should be under its own governance and separated out.

**Mr Laughren:** One question: If Hydro was seeking a legitimate way of resolving the problems of the A units at Bruce and Pickering and it was a serious request for an alternative source of power, what length of contract would you expect a supplier would demand in order to make a major commitment on the capital side?

**Mr Edwards:** You have to put that in the context of the industry. If we're looking at the industry as it's presently structured —

**Mr Laughren:** The gas turbines.

**Mr Edwards:** Yes, but still, with the industry as it's presently structured, you would be looking for 15-year, 20-year contracts. If access to the transmission system and access to customers is assured, I think that diminishes considerably. In New Zealand certainly they're getting into fewer and fewer long-term contracts. Two or three years are the longest types of contracts they're getting into.

**Mr Laughren:** The lines are there.

**Mr Edwards:** The transmission lines? There is access to the transmission lines.

**Mr Galt:** Thank you for your presentation. Recently we had British Energy here presenting to us. A great story they had for us. I'm sure there are downsides but we couldn't seem to pry it out of them at the time. They were telling us how all the services have improved, how safety is improved in all respects, particularly how the rates have gone down 14% to 18%, in that range. How would you see the MEUs faring if we had a similar thing in Ontario to what British Energy is telling us about with their competition and, to some extent, privatization?

**Mr Edwards:** We've done studies on that and we project the same level of savings, in the 15% to 20% range, out of introducing competition at the generation level. That is not the North American competition that is projected by Ontario Hydro; that's competition within Ontario. I think that British Nuclear also gets into a great deal of privatization. That's an issue that, in order for a market to work, has to be introduced at some point.

**Mr Galt:** But you see safety being improved as well, do you? That's not the feeling the general public of Ontario have.

**Mr Edwards:** Things like safety and the environment are matters that can be regulated, independent of the entire industry. We do that all the time in a number of industrial contexts. It's quite possible to do it in the generation field. Yes, I kind of think that in order to secure the reliability of supply, which in the competitive scene is reliability of income, they're going to adhere to the safety regulations.

**Mr Jennings:** You have in that case British Nuclear separated out as a separate company. The only thing we've heard from the British we've talked to who were involved in the restructuring over there is that they didn't break the generation up into enough competing. They only had three. The cabinet had to step in and stop some further amalgamations in other areas since then. But in nuclear you have a third party assessing the safety.

I think we've got a reasonable comfort level, as much as you can have, given what Mr Andognini and his team have found in terms of all the plants being safe, and the AECB, although they've put Hydro on a very short lease, which has been a signal that's been very clear for a couple of years. We're not experts. If you read through the energy board material we've provided, we were able to flag some issues several years ago about the lack of maintenance in the nuclear area. The safety seems to be there, and you have a third-party opinion on that. We're

saying you should have third-party opinions on the other things too.

**The Chair:** Thank you, Mr Edwards, Mr Jennings. I appreciate your attending upon the committee and your deputation and your forthright responses to the questions. I hope if we require further information you may respond in writing.

**Mr Jennings:** We'd be happy to, or to come back for further discussion if that can be useful.

**Mr O'Toole:** Mr Chair, on a point of order: I would request that the consultants or the Chair take under advisement to secure a copy of the television program shown last night on CBC National news with Peter Mansbridge and Brian Stewart, the report on the fire report. Because it featured some reference to Darlington, but more importantly to the Pickering plant in Durham, I think it would be appropriate if that report and the videotape were made available and presented to this committee for our complete understanding.

**The Chair:** Thank you, Mr O'Toole. In fact, the subcommittee dealt with that and is giving exactly the same instructions. We're proceeding in that regard as part of our briefings. Hopefully we'll have it available for Monday.

**Mr O'Toole:** Thank you very much, Mr Chair.

**The Chair:** I appreciate your bringing that to my attention.

1020

#### JOHN MURPHY

**The Chair:** The next witness is Mr John Murphy, a board member of Ontario Hydro. Mr Murphy, we welcome you back to the witness stand. Are there any opening comments you wish to make?

**Mr John Murphy:** No, I don't really have any opening comments other than sort of anticipating a question. I said at my last presentation I would go back and check in response to Mr Conway's questioning around the letter from the minister to the board. I have gone back, checked my notes, and I do have that information if you wish me to clarify that up front.

**The Chair:** Please.

**Mr Murphy:** Having gone back and checked my notes on that issue, the August 12 board meeting, when the decision was over with respect to the direction the board was taking, at approximately 4 o'clock in the afternoon the letter was distributed to the board members in the in camera session. So it did occur in the in camera session, it did occur after the decision was made and, as I said, it was around 4 o'clock in the afternoon.

**The Chair:** As a result of that, Mr Murphy, and I'm sure members will want to seek further clarification, was there any movement on your part or on the part of any other member of the board to revisit the decision that had been made prior to that letter?

**Mr Murphy:** No, and maybe I can clarify, from my perspective sitting as a board member, my views on this issue. In the minister's letter, which I think is quite

appropriate in terms of what he is outlining as expectations of the board in reviewing the issue and the factors that they should consider — even in the absence of that letter, that's precisely the approach that I had taken to the issue and the sort of approach I would expect people should take to such an important issue.

We had a lengthy debate. I rejected the issue after the lengthy debate based on a number of reasons that I would be glad to share with the committee, but when this was distributed as an information piece at the end of the day in the in camera session, it didn't seem to me that there was anything new that could be added based on the discussion we had had earlier on. All of the items the minister was identifying in there had been discussed, had been raised, and obviously not everybody was of the same viewpoint that I was around those issues.

**The Chair:** We'll go to questioning. Just as we begin, you are prepared to respond to any questions, including issues around the Chestnut Park accord and so forth, are you?

**Mr Murphy:** Sure.

**The Chair:** We will begin the questioning this time with Mr Laughren.

**Mr Laughren:** Welcome, Mr Murphy. The other day there were a couple of board members here and someone made a passing reference to the fact that you had voted against the recovery plan, and there was a look of incredulity on their faces — I don't know whether other members picked that up or not — and really questioned whether you had. I just want to have the record clarified as to whether or not you did indeed vote against the recovery plan.

**Mr Murphy:** Yes, I did, and in fact the minutes from that board meeting, which I think members of the committee have, also reflect that point.

**Mr Laughren:** I want to go back to the issue of that letter again, because I found your explanation a bit strange. After the presentation of the recovery plan and the decision on whether to support it, and the board generally supported it, although, as you say, you voted against it, when that letter was tabled, first of all, I find it very strange that it wasn't tabled before you had the debate on the recovery plan. I find that really weird, because it lays out the request by the minister very specifically. You have reviewed the letter, and I don't think I need to read it to you again, but it very clearly asks the board to consider all options, not just the ones that were laid before the board. I'm wondering why no one on the board, including you, picked up on that and said: "Hold the phone. We've got a request from the minister here" — who is, technically speaking, the owner — why there was no attempt to revisit that point.

**Mr Murphy:** I guess from my perspective, that letter probably should have been handed out at the beginning as opposed to at the end. I don't disagree with that. The fact that it was given out at the end, as I said, it seemed a moot point to me to be raising it once again.

What might put it into context is if I quickly review with members of the committee the types of issues I raised



in that board meeting and the reasons that led me to voting as a board member against the recommendation that was brought forward.

First of all, I should say that when the board agendas are put together, it is clearly identified in the board agendas whether issues are going to be dealt with at the board for information purposes or whether they are going to be dealt with for approval. The agenda that was sent out to me as a board member, which I received on the Friday prior, indicated that the whole issue with respect to the nuclear was an information item. That's what was clearly indicated on the agenda, that it was an information item, and I took it that was the way it was going to be dealt with at the board. In fact, that made sense to me, that this was a huge issue being brought to the board and the identification of the problems and looking at alternative solutions would be dealt with for information purposes for the board, and then proceed on from that in terms of action.

When we got into the debate at the board further on on that Tuesday, it changed from an information item to a specific recommendation. There were a number of reasons that I identified in being opposed to the direction that was taken, and I just jotted down some of the issues that I raised.

From the discussion we had at the board, this seemed to be a very expensive solution to solve what was being identified as a management problem. That's what was clearly explained to the board, that the majority of this problem was a management problem, that 80% was a management problem. If I remember correctly, the expression I used at the board was that maybe I come from an old-fashioned school, but to solve a management problem is a lot more direct and straightforward than shutting down seven reactors for three years and spending a lot of money, that there's a more direct way of making the problem management — and I don't think they're all problems — more accountable, giving them more training or replacing them if they're not up to the job.

I was really concerned that this decision to announce the shutdown of seven reactors would do a lot of damage to Ontario Hydro's brand, its reputation — Hydro had been spending a lot of effort and time, as it rightfully should, trying to build up its reputation, protect its reputation, enhance its reputation as we moved forward towards a competitive environment — and that this announcement of such a dramatic event would have a negative impact on that, which it subsequently did.

I was also concerned about a side issue, I guess, but none the less an important one for a utility that's heavily reliant upon nuclear power. I was concerned about potential damage it might do to the Candu reputation. The Bruce heavy water plant coming out as a result would lead to further disruption around approximately 500 people being moved out of that community, which would cause further aggravation among the workforce and make nuclear recovery that much more difficult. I was concerned about that, the fact that it would result in the termination of the contract Hydro had negotiated with

AECL to supply heavy water. The Bruce energy park and the Bruce community impacts were concerns I had. Shifting from a reliance on the seven nuclear plants that supply our base load to using more fossil and purchased power, I had concerns around the reliability aspects of that.

Overall, the major concern I had was that there was not enough consideration of alternatives around us — not just alternatives of options within nuclear, from shutdown of seven units to shutdown of no units, the shutdown of some variety in between, but also all of the other options and alternatives. That did not seem to be there.

They were the major concerns.

1030

**Mr Laughren:** It seems to me you were the only one to read the minister's letter.

**Mr Murphy:** As I said, prior to the minister's letter these were the issues that I raised and discussed in the context of the board. They are the reasons I voted against this decision at the end. Having done that and then having seen the minister's letter, as a board member I didn't see anything different in the minister's letter in terms of what I had done as a director and what I should be doing as a director in making my decision around that issue.

**Mr Laughren:** Do I have time for another?

**The Chair:** Yes. I'm letting this go to 10.

**Mr Laughren:** Okay, thank you.

This is switching gears a bit, but I wonder if you saw the National Magazine report last night on CBC.

**Mr Murphy:** I didn't see the article. However, I did some checking this morning because we were asked by quite a number of people about that. As best I can gather at the moment, this is not a new report; this is the old August IIPA report information that the CBC was referring back to, which did identify those fire safety problems. Again, I have somebody working on this at the moment, but as I understand, corrective action has been taken around most of those issues. That's just the verbal information I have around it for you at the moment.

**Mrs Helen Johns (Huron):** Good morning, Mr Murphy. I want to follow through. The first thing I'm asking you is as a board member because of the last meeting. You talked a little bit about your appointment to the board. I'm just wondering if there are any other employees of Hydro, besides the representatives from the two associations, the society and the PW, on the board.

**Mr Murphy:** Yes, there are. Eleanor Clitheroe is an employee of Ontario Hydro and a member of the board; Al Kupcis, the past president, was an employee and a member of the board; and myself. We were the only employees of Ontario Hydro who were also members of the board.

**Mrs Johns:** So the three of you, now two of you.

**Mr Murphy:** Yes.

**Mrs Johns:** You voted against the recovery plan in August 1997. Can you tell us why? I know you went through a number of the reasons today. Is there one fundamental concern you had, or was it a wide range? You've talked about some of them already. I don't want

you to go through all of them again, but was there one that was the premier issue to you?

**Mr Murphy:** Yes. The major issue to me was that this was a major, expensive decision that was being made to solve what the team itself was saying was essentially a management problem. I didn't buy then and I don't buy now that that's the only way you can solve a management problem. I just don't buy that. They themselves have continued to express the opinion that the major issue here, 80% of the problem, is a management problem. That was the driving factor behind me. I wasn't convinced that this was the only option to solve that management problem.

**Mrs Johns:** I want to explore due diligence. Can you tell me what committees you're on with the board?

**Mr Murphy:** I'm on the nuclear review committee of the board.

**Mrs Johns:** Just the nuclear review committee?

**Mr Murphy:** Yes.

**Mrs Johns:** Have you been on the —

**Mr Murphy:** And the audit committee. Both.

**Mrs Johns:** All right. I thought I was reading things. With the audit committee, can you tell me if you have had a series of meetings with respect to the IIPA report and the recovery plan? Have you over the last year heard about this report coming through the process, heard about the numbers? And since August, have you been involved in more discussions about the recovery plan?

**Mr Murphy:** Yes, the audit committee has been involved right through. There was no advance detailed discussion with the audit committee in terms of the detail around the solution being proposed for the reactors other than that the major role the audit committee has been doing is the due diligence work around making sure there's adequate disclosure to the external community around any major financial factors affecting Ontario Hydro. Obviously, the issue around nuclear recovery has been a major issue for them. It's why the audit committee has consistently made sure there were the appropriate alerts going out into the external community around potentials for problems in the nuclear side of the business.

**Mrs Johns:** On the nuclear review committee, can you answer the same question for me there? Were there discussions along the line, for the year before or however long Andognini was at Hydro, at most of your meetings about what he was finding and that kind of information?

**Mr Murphy:** Not in any detail per se. What Carl Andognini requested of the board, the nuclear review committee and the audit committee was that he not be required to give any kind of detailed updates on progress as they were going through, the reason being, he said, that in the process they were going to go through, they wanted to evaluate all of the options and come back with a comprehensive finding along with options that the board could then consider. So the types of updates were very basic. There were no specifics in terms of content in any of the reports that were given by Andognini to any of the committees or the board.

**Mrs Johns:** I have in my hand the IIPA report to the management which is dated July 21. Did you see that in July?

**Mr Murphy:** No. This is the — can I just check?

**Mrs Johns:** Sure.

**Mr Murphy:** Absolutely not, no.

**Mrs Johns:** Can you tell me since August your attitude towards this in the board meetings? We haven't got all of the board minutes yet for me to be able to ask you this question. I'm going to have to rely on you telling me exactly what you've said here for at least another week or two till I get them out of Hydro. Can you tell me the position you've been taking on this? Are you adamant? Are you seeing the wisdom of the board's ways? Where have you been going on this since August?

**Mr Murphy:** As with any board, there's a democratic process for making a decision. Once that decision is made, then fulfilling the role of being a board member, life has to go on. You don't keep revisiting or trying to revisit that issue. However, what I have been attempting to do is make sure the financial analyses around the issue are fleshed out sufficiently, that the elements of the recovery program, because there are quite a number of elements in the nuclear recovery program that are quite right and quite adequate and quite appropriate, are being acted upon. That's generally the approach I have been taking around the issue.

**Mrs Johns:** I've been a member of boards, but I have to say that the ones I've been a member of are really little companies. They don't have near the kind of money or near the kind of responsibility you have as a member of Hydro, the heart of Ontario's assets or something, as we call it. I think all of us who have been board members consider the relationship you have with the shareholders, with the employees, with the whole corporation and the direction of the corporation as absolutely important. In fact, you have a responsibility that could lead to some legal ramifications if you chose not to follow in that line.

I have to ask you, if you felt you had an alternative plan that you presented to us, why did you think you didn't have to present that to the board?

1040

**Mr Murphy:** Because the board had made its decision. As I mentioned when I delivered our alternative plan to this committee last week, we didn't have any advance opportunity to be consulted and say: "Do you have an alternative plan? Can you present an alternative plan to us?" We didn't have that opportunity.

Once the decision was made back in August, we have worked since August up to now, up to this point in time, in trying to come up with what we think would be a realistic, an achievable, a defensible and a responsible alternative plan. That's what we attempted to try and do. In fact, we finalized that plan a couple of days before I came before this committee.

The day before coming to this committee, I took the opportunity of sending that plan also to Ontario Hydro management for them to review and look at. I felt that was the appropriate thing to do. From Ontario Hydro



management, forwarding it on to the board would also be our intention, to do that.

**Mrs Johns:** My concern with that is, and maybe I'm just listening to other people, but the chairman of the board, definitely Mr Bullock, but I think all three board members besides you who have been here have told us that this is not a static plan, that there are going to be key decisions made at every turn. I think Mr Bullock talked about meetings every month from now on to decide on where we should go and the financial implications of each of these decisions. As we all know, we can't make a plan out five years and expect those decisions to be the key decisions. Mr Farlinger came in here and said, "If there's a better solution, I want to hear about it."

Do you think, since you've seen him and the board in August, September and October, maybe you should have said something to them?

**Mr Murphy:** There is virtually nothing new in the plan that I presented before this committee that I haven't discussed at the board as part of these deliberations, as part of these discussions; there is absolutely nothing new in that plan. In fact, as I said when I was before this committee, that plan is really not our plan; it's one of the options that Ontario Hydro looked at and rejected. It was scenario two, if I remember correctly, from the Hydro options that were looked at. So really there is nothing new and, as I said, I have also forwarded that plan to Ontario Hydro.

**Mrs Johns:** Have they had any votes on the plan since August?

**Mr Murphy:** Votes on the plan at the board level?

**Mrs Johns:** Or at the audit or the review committee, wherever you sit in your capacity as a board member.

**Mr Murphy:** I'm trying to recall if there was any specific element of the plan that was discussed that required voting on. I can't recall that there has been a vote on any particular element of it right now off the top of my head without checking, but I could certainly check on that and get back. I don't think there was on any aspect of it.

**Mr Kwinter:** Mr Murphy, you're now here in your hat as a member of the board. I know that the last time you were here we had a little bit of difficulty because you had a perceived conflict in the two hats that you wear. Do you sit on the board as the president of the Power Workers or do you sit on the board in spite of the fact that you're the president of the Power Workers?

**Mr Murphy:** The latter.

**Mr Kwinter:** You can't separate it, but you're not there to bring the labour perspective per se.

**Mr Murphy:** I think, given the diversity of Ontario Hydro, the thinking was that there should be a mixture of people with diverse backgrounds on the board. I presume that's one of the reasons why I was selected, but the selection process was very clear, that I would not be there because I'm president of the Power Workers.

**Mr Kwinter:** If you were to cease to be the president, you wouldn't automatically be succeeded by the president?

**Mr Murphy:** No.

**Mr Kwinter:** I'd like to get into something that I found almost startling. As Mrs Johns says, I sit on several boards, and some of them have been fairly large public boards. When I get my agenda, if I get an information item, I glance at it and I say: "I'll get to that. It's just information. I don't have to make a decision on it." If I get an item that is an agenda action item, that I'm going to be called upon at that meeting to vote on, then of course I go into great detail and try to find out as much as I can because I'm going to have to make a decision.

When was that item changed? When was its status changed from being an information item to being an action item?

**Mr Murphy:** During the board itself.

**Mr Kwinter:** During that meeting?

**Mr Murphy:** During the meeting itself, because I had raised a concern at the meeting exactly along those lines. My preparation was along the lines that this was going to be an information item; we were not making decisions. I was informed that no, there would be a decision made, that that was incorrect.

**Mr Kwinter:** I don't want to put words in your mouth, but I can tell you what my experience has been. If I had received the agenda a week prior to the meeting and I saw items that were for information only, I would not give them the same attention that I would give items I'm going to have to make a decision on. Is that a fair analysis?

**Mr Murphy:** That's a fair analysis. However, I must admit in this case that because of the magnitude of the issue, in terms of attention, I gave it a fair degree of attention, looking into it. However, I certainly was not expecting or prepared going into that board that I was going to be dealing with a decision at that particular board of the magnitude that we ended up dealing with.

**Mr Kwinter:** In the minutes of that meeting we had Mr Bullock, a recent addition to the board, questioning how this decision was being made, what kind of financial analysis, what were the implications. Now that you tell me, he didn't know until he got to the meeting that a decision was going to have to be made. We had Ms Clitheroe saying exactly the same thing. We had you voting against it. Who was driving this decision to suddenly change it from an information item to an action item?

**Mr Murphy:** It's difficult to pick out one individual who really was driving it to being a decision. There were a number of people who felt that they were satisfied sufficiently with the information that was presented before them to get on and make a decision. That came from a number of sources, and towards the end of the day the chairman introduced the motion and said, "We are going to go forward with the resolution," and introduced it before the board.

**Mr Kwinter:** When the other two members of the board were here, I asked them their interpretation of the minister's letter. Their interpretation — again, I don't want to put words in your mouth — seemed to be a little different than yours.

When he said, "You can appreciate that the government expects all options will be thoroughly evaluated," their interpretation was that the minister had been told of the report, had been told that Mr Andognini had put forward six options, and that their mandate and their direction from the minister was to examine all of those options before the decision was made, which means it was only the nuclear option. Again, I don't want to put words in your mouth. Others felt that meant all options — "Maybe we shouldn't be spending this much money to rehabilitate the nuclear facility; maybe we should" — to say we should examine all of those options.

What was your perception, although I understand the decision was made before you even saw the letter?

**Mr Murphy:** My position was, prior to seeing the letter, during the board debate, and upon seeing the letter, that the responsibility on me as a director was to make sure that we looked at all options, that all options were explored. That's the expectation that would be upon us in terms of any major decisions we make, to be sure that we satisfied ourselves of all options.

**Mr Kwinter:** We've heard from the AECB, we've heard from experts that safety was not at risk at any of the facilities. The potential for safety problems was there because of poor maintenance, poor management direction, but as far as they were concerned, notwithstanding that they were on a short leash as far as their licence, that was not a problem.

We had Dr Jeffrey saying that at British Energy the number one concern is safety. They didn't seem to be able to implement it, but that seemed to be the same concern at Ontario Hydro.

1050

The reason I'm saying that and what I want to ask you is, if safety was not a concern, notwithstanding that there were problems with management, problems with maintenance that have been long known to Ontario Hydro and long known to everybody who has an interest in it — everybody who came forward told us that — why was there this sudden urgency on August 12 to take an information item and convert it to an action item, an item that's going to require the expenditure of \$5 billion to \$8-plus billion, that's going to bring on fossil fuels, with their problems, that's going to lay up facilities, disrupt the baseline source?

Why would that all happen with such urgency? We have the president resign, all of these things happening as if there is a crisis or the implication that we've got to create a crisis. I just don't understand the timing of all this.

**Mr Murphy:** That was precisely my concern at the board when we had the debate and discussion around this. I too didn't really understand the crisis; I really didn't understand the urgency. As an example, regarding the fact that we were scheduling a press conference the next day to announce this, I was concerned about the impact it would have on Hydro's brand, on Hydro's reputation, when in fact it wasn't a safety issue we were dealing with concerning the reactors; really what we were dealing with

was a performance issue. We wouldn't be shutting down those reactors till beginning in January anyway. The Pickering reactors would have been coming down in January regardless, because they were going to be shut down to do the additional safety system installation. Those are the concerns about what the need was for the urgency of making the decision then and announcing it the way we did.

**Mr Conway:** Mr Murphy, I want to pursue this perhaps in a somewhat more pointed fashion, because you yourself said you were a member of the nuclear review committee of the board.

**Mr Murphy:** Yes.

**Mr Conway:** The committee has several board minutes from, among other things, the nuclear review committee. I have the one here from January 22, 1997, which is about six months before this fateful day in August 1997. It is very clear that on that date, on January 22, 1997, your committee was being told by, among others on that day, the recently hired Mr Andognini that there's a culture problem. Let me read from the minutes.

"In discussing cultural problems at the nuclear stations, Mr Andognini stated the cause for concern is the nuclear culture, one which is neither American nor Canadian." He went on to detail that.

Then you hear at that meeting that the 1996 year-end operating results from the nuclear stations are not meeting the targets that you as a board have set. At this point you know the AECB is rattling sabres about Pickering. What I want to know is, as a board member you are on this committee that was hearing this stuff, why didn't something happen?

**Mr Murphy:** I think something did happen. Obviously things happened. If it wasn't for the nuclear review committee, I don't think Carl Andognini and his team would have been hired and brought in to investigate the extent of the problems. The type of things you're referring to in those minutes were the same kinds of reports that were made to the board repeatedly, that what we were primarily dealing with was a cultural problem. I never anticipated in my mind that the way you solve a cultural problem is by shutting down seven reactors. A cultural problem, a management problem, a people problem: There are more direct, immediate, much cheaper solutions to those kinds of issues.

The performance deficiencies you're identifying, the peer evaluations, the way they were addressed, the way they were discussed and certainly the way I, as a board member on those committees and at the board when we discussed those issues, pushed them was that the problem we had was with these peer evaluations that were done. These are evaluations where you come in and apply a very critical eye to find out what things are not being done right; not to find out what things you are doing right, but really to focus on what things are not being done right. Yes, they were negative. The problem, Sean — and I agree with this and I certainly stressed this in the committee meetings and at the board — was that there was no accountable tracking system in place.



In other words, if you were the director in charge of plant A and you had a peer evaluation that said you had done five things not very well, there wasn't a follow-up mechanism that said, "These are the corrective actions I'm taking. We've addressed these." We were seeing repeat findings which confirmed the original issue, which was the cultural problem, the management accountability problem.

**Mr Conway:** I'm running out of time, but I would like, just if I can —

**The Chair:** Mr Conway, I really do —

**Mr Conway:** How many minister's letters would you have received in the time you were on the board?

**Mr Murphy:** Not very many.

**The Chair:** I will allow everybody to ask one additional question after I cut you off, with the exception of Mr Conway; he has used up his treasury of merit. Mr Laughren, we're into three minutes.

**Mr Laughren:** Mr Murphy, I ask you this question as a member of the board; I know you're president of the Power Workers' Union as well. Mr Andognini's report has a section called "Labour Relations," and on page 32 they say:

"Certain provisions of the union contracts limit the effectiveness of management. Major issues include the following:

- "Collective agreement restraints;
- "Purchased services agreement restrictions;
- "Strike threat;
- "Fitness for duty;
- "Chestnut Park accord;
- "Personnel and vehicular searches;
- "Too many union officials on full-time release."

Does the board in general share those concerns? I'm not asking if you do. It would be very difficult for you to say that. Do you think the board in general shares that concern about the collective agreement with Hydro?

**Mr Murphy:** I'm not sure, because there has never really been a debate or discussion at the board on that, where you could sort of sense where different people were coming from. What I can say is that back at the August 12 board meeting, when the report was presented to the board, I asked a question of Carl Andognini. I asked if there was discussion with the union around that whole section to see if any of these problems could be resolved. He said at that board meeting that there had been no discussion with the union around it and that he wouldn't be discussing it with the union until such time as he had dealt with it at the board. The follow-up response I had back was, "How do you know there's really a problem unless you've gone through that step first? You go through that step and then you determine whether there's a problem." That was the extent of the discussion we had. But I don't really know. I'm sure there are probably people on the board who would share that view, as I suspect there may be others who do not.

**Mr Laughren:** He told us that while he didn't discuss these matters with the union, he did discuss them with workers.

**Mr Murphy:** I'm not sure what that means. If you take the issue of too many union people on release time, I asked Mr Andognini a simple question that he didn't have an answer for. I asked: "Has your investigation concluded that has created a less-safe work environment? Having more union people on release time, are they out there trying to cover things up or are they actually making the workplace safer? Is that leading to a less safe environment or a more safe environment?" He didn't have an answer. I asked: "Can you give me an answer whether or not the other issues that are in there that we identified, Chestnut Park accord and purchased services agreements, are costing the company money or are saving the company money? Has that analysis been done?" He didn't have an answer on that either.

**The Chair:** Thank you, Mr Laughren. I paused for just a moment to see if he would slip another one in, but nevertheless he did not, so we'll go by. Ms Fisher.

**Mr Murphy:** Hi, Barb

**Mrs Fisher:** Hello again. I want to dwell a little bit on a presentation that was made to this committee yesterday with regard to the British power restructuring in total. My understanding is you've seen that presentation in the past.

**Mr Murphy:** Yes.

**Mrs Fisher:** Has the board ever received that presentation?

**Mr Murphy:** I don't believe so, Barb, no.

**Mrs Fisher:** Do you think that would be a good idea?

**Mr Murphy:** I think it would be. I think it would certainly be something that would be useful for the board members.

**Mrs Fisher:** I saw it yesterday for the first time. Of course, there are always two sides to every story. We've seen the one side, at minimum, so far.

Having said that, if I was to be inspired by anything that came out of that in terms of our potential recovery in the nuclear realm at least, which I think we're working towards, given the reduced rates for power consumers, given the higher safety performance, given that I quizzed him in detail, quite frankly, with regard to how the employees were treated, given that they retained their levels of pay, their benefits and in fact have even benefited again from that with these two other merit award systems — I think they were called gainshare and share options; share options is the newest introduced package — I would like you to help me understand how we, that is, Ontario Hydro management and the workforce, can achieve those same levels of recovery.

**Mr Murphy:** I think the way that happens is understanding the extent of the problems you have. I know Hydro's been getting a lot of criticism. To give credit to Ontario Hydro and particularly Dr Kupcis, where credit is really due I think was in hiring Carl Andognini and his team to come in and investigate what was wrong, to tell us a brutally honest assessment of what was wrong. That part made sense. The part where I come apart as a board member is in terms of then coming up with the one and only type solution to the problem, as opposed to other solutions to solve those problems that were identified.

1100

To go back to your question, Barbara, which is a little bit broader I guess, the single most important thing is we need effective leadership within Ontario Hydro. There's a search on right now to find a replacement for Dr Kupcis. The sooner that happens and we get somebody who can really lead the organization better — with that sort of void of leadership there, it's very difficult to have a pulling together of the management in terms of moving forward around direction. That's one thing that's important.

The second thing that's really critically important is that a lot of Hydro's activities have been consumed with trying to imagine, to guess, to second-guess what might be future structures under which we would be operating, and what's needed is getting back to basics where we say, "The government may decide that a different structure is going to come down in the form of the white paper," but currently we have a structure that's defined under the Power Corporation Act — responsibilities for directors, responsibilities for management who report to them —

**Mrs Fisher:** Can I just interrupt for one second. The issue is the culture and I think it's a double culture, to be honest with you. Not only does management have to manage and make good decisions — I totally agree with you and I understand the errors in the past and what they've caused — but it has to be a full buy-in by everybody. If we don't get that culture redeemed to where it used to be 20 years ago when I was a proud Hydro employee, I don't know how we're going to recover the situation. I know it's not an easy answer and it's not an easy question either. I just wish if I could convey anything, it is that's something we have to work together towards.

**Mr Murphy:** Absolutely, Barbara, that's really important. People who work in Ontario Hydro, the vast majority, are still proud of what they do; they want to do a good job and they want to feel good about their industry. The sooner that happens, the better, where they're given that opportunity to have a sense of pride restored in their company and their work.

**Mr Kwinter:** I want to pick up on a couple of concerns I have and that I've been asked about. I used to be the Minister of Industry, Trade and Technology and I'm the critic for that area, and people who have been watching what has been going on have said, "What do you think this whole discussion is going to do to the reputation of the Candu reactor?" That really isn't the purview, but you raised it. What do you think?

**Mr Murphy:** It's unfortunately had a negative impact on the Candu reputation. Despite the efforts to be clear that there isn't a criticism of the technology in the finding from the team, the perceptions none the less are that you have a Canadian technology that Canadians are having difficulty in managing. In terms of AECL's ability to sell Candu reactors abroad, that has to have a negative impact on that. I don't know if it really is having a negative impact, but I suspect it is. That's been my concern about it and my view on it.

**Mr Kwinter:** In my role as the minister, I have helped to try to sell them in India and a few other places as part of trade missions, and I can tell you, if I were the competition I would be carrying reports of this committee everywhere I went, to say, "These guys are trying to sell you technology they are shutting down in their own jurisdiction and they're having problems with it." That would be very effective. I really feel that is a concern and an issue someone's going to have to address.

**Mr Murphy:** It certainly is a concern for a lot of people, for sure.

**Mr Kwinter:** The whole other area Hydro is looking at and, as I say, the question was raised by other members, is the ability to finance this recovery plan. What are your feelings on that? I'm sure there's the ability, because they've got this asset that they've got to do, but what is the impact of that?

**Mr Murphy:** Going in the direction Ontario Hydro is choosing with their plan to shut down the seven reactors and incur the additional high costs of replacement energy for the three-year period I think is really going to challenge Ontario Hydro's ability in terms of the finances around it. It is going to be very tough. Trying to be everything to everybody, trying to fulfil the obligation of no rate increases through that period while being in this kind of predicament, is going to be make it very tough. The other obvious impact is that at the end of the three years, we will not have had the ability to pay down our debt through that period of time. The money we would have been using for debt reduction, in other words, will be used to pay primarily the replacement energy costs and the costs associated with the nuclear recovery.

**The Chair:** Mr Murphy, I thank you. I have a couple of very quick questions to ask of you before you're excused, to clarify my information here from your testimony.

It would be reasonable to assume that prior to August 12 you, as a board member, were at least aware there was a development of a recovery plan under way.

**Mr Murphy:** Yes.

**The Chair:** How long had you been aware that recovery plan was being formulated?

**Mr Murphy:** Right from the start, shortly after Carl Andognini and his team were brought in, I was aware from that point that they were being brought in to do that full assessment and lay out to the board of directors what their findings were. Also, where information changed was that I was under the understanding, based on the earlier information from Carl Andognini and his team, that a list of options would also be presented for the board to consider at that time.

**The Chair:** Would it be reasonable to assume that, with that knowledge you had as a director of the board, that knowledge was also then understood at least by the Power Workers?

**Mr Murphy:** Certainly, and with our members as well. Carl had made an effort to go out into the work-places and had face-to-face meetings and told people exactly what they were doing.



**The Chair:** You've indicated in your testimony to the committee today that in your mind at least the problem was at least 80% management. That would mean by the time you got to August 12 you had a sense of what should be done to deal with Hydro. So as you arrived for that meeting on August 12 you had a sense of where, at least in your mind, you thought Hydro should go, and certainly by that day you had a sense of the recovery plan that was being recommended, at least for information. You had a sense that there may be differences of opinion at that point.

Had you by that time made any introduction of your thoughts to the board? Did you present to the board at that time even the nucleus of the study that you later presented to this committee to represent the Power Workers?

**Mr Murphy:** All through the process, I guess even prior to Carl Andognini and his team coming in, on every opportunity I could get I had stressed the point of management accountability being the single most important thing we could do. If you check with the chairman and with other members of the board, they'll confirm that's in fact the case. What I had said was that the old mentality that had evolved within Ontario Hydro, where you had a job for life if you were in management, that kind of thinking, was no longer relevant.

1110

**The Chair:** I understand that, Mr Murphy. The only point I'm trying to raise was you presented this committee with a reasonably fleshed-out position. Clearly that didn't just happen; it is something that had taken some time to evolve. Are we able to find evidence through the meetings of that position having been placed? You were a director of the board, and did you place that position on record prior to August 12?

**Mr Murphy:** No, I didn't place it prior to August 12 because I had absolutely no knowledge in my mind as a director that the recommendation coming forward would be to shut down —

**The Chair:** Can I just finish off the final point because your evidence today has caused me to at least now place into some question an evaluation I was beginning to make about the process. I want to go back to that meeting on August 12 because what has troubled me, I think along with other members, was the spectre that suddenly a major decision was being made almost out of context.

It was almost — it was there. We've heard your evidence that it was brought forward on an information base, and suddenly as the meeting progressed things changed and it became an action movement. In fact, your testimony when you were asked — I think by Mr Conway, if not Mr Kwinter; it may have been Mr Kwinter, the Vice-Chairman — who was driving this, your response was that it was very difficult to identify any one person who was driving this, that indeed the change from information to action occurred throughout the day, and the quote was that a number were satisfied with the information and felt they had enough information now to get on with a decision — that's almost a direct quote from your evidence.

**Mr Murphy:** Yes.

**The Chair:** The vote was then finally taken and you are the only dissenting vote. There are people of remarkable experience and background. There is Mr Farlinger, there's Allan Kupcis and there's Eleanor Clitheroe. I can read a number of names down the list you would know better than I, people of distinguished experience and background, who at that point seemed to be giving the impression at least from the evidence and from the records that they are now satisfied. They have looked at all the alternatives and that is, after all, what the minister has been asking for: "Look at alternatives. Look at the options." They have in fact had laid before them a number of scenarios and they believe at this point they have now been given everything they need to have and now it seems reasonable to make a decision. Would it not be reasonable to at least make that conclusion as I read the evidence?

**Mr Murphy:** Just one correction: Allan Kupcis wasn't there. He resigned that morning and wasn't there for any of the discussion on this issue.

**The Chair:** All right. I'll insert the name of Mathur.

**Mr Murphy:** Yes. I can't really try and second-guess why the other board members reached the conclusion they did when it came down to the crunch. Certainly, during the discussion there was more than myself who were raising, I think, appropriate questions around the issue: Had careful analysis been given to the options? Were the options looked at? Some of the other issues we had identified earlier, some of the financial questions —

**The Chair:** But that could well have been a matter of saying: "Look, we might need more time. It might be nice to have more time. We'd like to look at this. We'd like to look at that." But what evidence you have given this committee today, and I just want to finalize this point, was that at a certain point in the day it seemed to become evident that the mind of the board had crystallized and it seemed to be saying as one, "While there will always be some questions that will be here and there and we realize we need to have some flexibility as we go through this, at least at this point we seem to be able to make a decision of moving in this direction," and with one exception they agreed to do that. Would you agree with that?

**Mr Murphy:** Yes.

**The Chair:** Thank you. I have no other questions. I appreciate your being before the committee today. I appreciate your time in coming back a second time. I hope, in case we require you, you will come back again.

**Mr Murphy:** Certainly, and I appreciate the opportunity.

**The Chair:** Thank you, Mr Murphy, very much. You are excused.

#### CANADIAN NUCLEAR ASSOCIATION

**The Chair:** We will turn to our next deputation. That is the Canadian Nuclear Association, Murray Stewart. Mr Stewart, please come forward to the witness stand. We are ready, and welcome to the committee.

**Mr Murray Stewart:** Good morning. My name is Murray Stewart. I'm president and chief executive officer of the Canadian Nuclear Association. I am joined this morning by Mr Colin Hunt, our association's director of policy and publications.

It certainly is a pleasure for me to be here today to provide this panel with information on the nuclear industry and to respond to questions I'm sure you will have for us.

The Canadian Nuclear Association has a long relationship with our legislative process and we strongly endorse the purpose of this committee. Whenever there is a rigorous, professional and factual review of any part of our industry, we welcome it and are prepared to give it our wholehearted support and assistance.

We have submitted quite a bit of background information to you. This included our nuclear yearbook, which is an annual review of our industry, some of our fact sheets relevant to your investigations, and a somewhat more formal presentation package with detailed information on the nuclear situation in Canada and around the world. I do not intend to go through any of that material, but give them to you as backup information that you can study or that may prove useful in any queries you may have for us later on.

As many of you may be aware, the Canadian Nuclear Association was formed in 1960 and is a non-profit, voluntary group which promotes the peaceful uses of nuclear energy and technology. It's comprised of nearly 100 corporate members, including electric utilities, universities, engineering consultants, banks, labour unions, professional associations, federal and provincial government departments, reactor component manufacturers, isotope suppliers and uranium producers. It pretty well covers the whole spectre of the nuclear industry.

Our association's scope covers the three legs of our Canadian nuclear industry: the uranium mining industry in which Canada is the world's leading supplier; the medical isotope industry, again in which Canada is the world's leading supplier; and of course the power generation industry, which includes both power generation and our Candu technology industry. Today I'm pretty well going to be focusing on the power generation side of that industry.

Let me state right up front that we support, and indeed endorse, the excellent piece of work recently completed by Ontario Hydro; that is, the IIPA study and the subsequently developed recovery plan and all its options. There have been many starts to this process over the past several years, as this committee has heard over the past several weeks, but we believe that with strong leadership at all levels of the organization, the full support of the Canadian nuclear industry, the continued strong leadership from our nuclear regulator and support from the host communities, it can and will be successful.

Equally important, we must all have both the patience and the dedication to ensure this time we are successful through a continuity of efforts by all involved. Milestones, I believe, are set, they must be met, but they also must be achievable so that we can all benefit.

There's a lot riding on this challenge. Our association is dedicated to helping this happen, such that all Canadians will once again be confident in this electricity generation option and be comfortable in receiving the benefits nuclear energy gives. Some of these benefits are being the most environmentally benign, large-scale, proven power generation technology, the spinoff economic benefits for Canada in terms of jobs and economic gains, the safety benefits, the unique waste management benefits and of course low-cost electricity for our homes and factories.

Before I open it up to specific questions from you, let me just close by giving you some facts about our industry, noting that these may be somewhat in conflict with some of the previous presentations you've heard over the last several weeks.

First, nuclear power generation is not a sunset industry and is not shrinking. Currently around the world there are 36 nuclear reactors under construction with another 15 in the final planning stages. This is actually more than there were one year ago. The industry is expanding. Just to put it in perspective, this represents, under construction around the world, more than the total of two Ontario Hydro nuclears. I could take you around the world and show you all those tomorrow morning, if you wish.

Second, during the last 12 months there has been a net increase in nuclear power generation installed capacity of almost 7,000 megawatts. This is in spite of the shutdown of several units in North America and Europe. What is happening is that smaller, older, less efficient units are being replaced by large, modern and more efficient units, not unlike many other industries and other sectors around the world. It also illustrates the commitment to nuclear power generation in the rapidly growing developing nations.

Third, it is a fact that there have been no new nuclear power plants ordered in Canada and the US in over a decade, but just to realize that, there has also been no other type of large base load power generation plant started in North America either. Through deregulation, North America has not required major new power generation facilities, nor do I believe it will in the next number of years.

#### 1120

Fourth, nuclear power is the only large-scale power generation option for most industrialized and developing nations that totally contains its waste in a safe and effective manner. There are no greenhouse gases or other forms of toxic emissions released into the biosphere.

Just in conclusion on my opening remarks, I believe nuclear power generation has proven itself to be safe, reliable and cost-effective in many countries around the world. Certainly, and I think through this panel, we must ensure that Canada continues to be one of those countries.

I would be most pleased to go into more detail, as much detail as you wish, on any of the information I've presented here or in my opening remarks, address any questions you have. If I cannot give you the information now, I'd be pleased to get it to you. If I can't do that, I'd



be pleased to recommend who should come before you to give the information directly to you. I'm basically here as a source of information for you. You're more than welcome to ask any questions, with my colleague beside me as well to help.

**The Chair:** Thank you very much, Mr Stewart. We'll begin the questioning with the government caucus.

**Mr Galt:** Good morning. Thanks for your presentation. I think I can sum it up by, you're telling me the status quo is okay.

**Mr Stewart:** Not in Ontario.

**Mr Galt:** That was my interpretation of your presentation. I won't take you to quite the task that I did the society the other day, but I can't agree that the status quo is satisfactory.

**Mr Stewart:** I don't think I said that.

**Mr Galt:** What did you tell me?

**Mr Stewart:** I think I said I endorsed the recovery plan and the actions that Ontario Hydro is now taking. I think probably for the first time they've gone into the most rigorous program they've ever done. There are fundamental changes to the way they've approached it. I think they've brought in the right kind of folks both to put the plan in place and also to implement the plan.

**Mr Galt:** I think we have to take our hat off to the present chair in having the intestinal fortitude to have a real serious look at their operation and what's going on. Surely to goodness, you can see some alternative ideas to the recovery plan. Have you bought in 100% to this recovery plan or are there other choices that you see that might be more viable? Do we have to shut down all seven at once, for example? Should there be a rotation? Should they all come back? Should a few come back at a time? Have you bought 100% into this recommendation?

**Mr Stewart:** I think it's a viable option. I'm sure we can fine-tune, we can tweak a lot of these options. From what I see in the plan, it looks doable. From my view, what we need at this point is a doable plan. That's something you should all be very serious about considering. We don't need an overly optimistic plan, we don't need an overly pessimistic plan. We need a doable plan.

Whether we're shutting down seven or six or five or nine, time will tell a little bit on that. Some are already down. There's not a lot of flexibility in some of the units at Bruce. Let's face it; those units have to be reworked. The effect of what's happened at Hydro over the last number of years, we call it the management plan, the cultural plan, but the net result of that is that these plants need work.

**Mr Galt:** Your comments about some of them being shut down, some would look at this committee as, the horse is already out and we're trying to close the barn door. It's kind of difficult to retract that once it's there, but yes, they do have to go ahead and we recognize that.

I'd like to explore for a few minutes with you some of the things that have come up here. We've heard from the three chairs. Franklin told us how he improved the conditions back in the 1980s. Strong said it was much

better after he left than when he arrived; there was a crisis when he started. He more recently talked about a nuclear culture. Our present chair is talking about a cult, that it's a nuclear cult that's running this operation. We've also been told that this cult is at all levels. We've also had various levels in from Ontario Hydro and they've all said, "Not me; it's the other people."

We had a Candu reactor. We were the leaders in the world once upon a time. What happened?

**Mr Stewart:** You've heard from many folks. It is an Ontario Hydro issue. There are other Candus around the world, there are other nuclear utilities around the world that have never experienced these problems at all, and that includes people with Candus, both in Korea and other places around the world. So I think you do have to focus to a large degree on Ontario Hydro when you look at this and the total package.

We can go through and rehash a lot of the management, the culture, changing from a construction mentality culture to, you might say, a more mundane — watching the kilowatt-hour metres just churning out electricity.

One other point I think you should be looking at that maybe you haven't focused on quite as much is just the list of names you went through. Even on a personal basis, I've been through corporate turnarounds in my own companies and other companies I've been involved in. The continuity is one thing that's lacking. That is something that I think is the change in this process, as I mentioned. We've got the people who came in. I think Al Kupcis did the right thing by also making Carl the chief operating officer as well as the consultant to find the solution. To use an old GE term, he's got his hand in the fire. He's got to perform. He's not only developed a plan, he's there to implement it and make it happen. If you want to say the one concern I have, I hope they're all around long enough that we live and give them the opportunity to produce this.

Maybe a little more specific to your point, I think there's been, no question, a lack of continuity so that we haven't had chief executives, we haven't had presidents who have been through ups and downs of all these structures. That's leadership.

**Mr Galt:** You've talked about different places in the world, some of them like British Energy, that has gone to competition and, to some extent, privatization. We have had a monopoly, a power unto itself, no pun intended, at arm's length from the government, totally at arm's length from the consumer. We found out recently that the rural customers' rates don't even come before the energy board. It's only the big customers' rates. Is our problem that it's been a monopoly for too long?

**Mr Stewart:** I'm not sure monopoly is the problem. I'm not sure of that.

**Mr Galt:** Would we have been in this trouble had we broken it up 10 years ago or five years ago and had some competition within the organization, like GM and Ford and some of the car plants have within their companies? Would we be in this position today? British Nuclear tells us it's much safer now that they've gone that route. Both in slips and falls as well as nuclear safety, they've

improved tremendously. We still hear about all the leaks and problems we have here.

**Mr Colin Hunt:** Mr Galt, if I could deal with that question, when you look at, for example, the turnaround that happened in the British electrical system with respect to the breakup of the CEGB, what you see on the surface is the breakup of the monopoly into the various operating companies and into the transmission system, the grid, and the various regional distributions.

What was most important there, and I'm looking specifically at nuclear electric, was that nuclear electric was not privatized. It remained in the public sector. One can't say that public ownership as opposed to private ownership had anything to do with the recovery of this system, and the recovery of the British nuclear system is frankly astonishing. They took a nuclear technology which was averaging 20% or 30% capacity a year and brought it up to above 70% capacity a year. They also did that in a situation where they were chronically overstaffed, far beyond anything Ontario Hydro ever imagined. This turnaround happened despite the fact that they remained in the public sector as the sole operator of all nuclear facilities in Britain.

The important point here is that originally the CEGB was a government agency similar to Ontario Hydro, with a very large and complicated mandate. Part of its mandate was to make electricity, perhaps the largest part, but it also has all kinds of other responsibilities attached to it at various times and places, specifically regional job creation and regional development. When nuclear electric was split off, suddenly it no longer had a complex mandate any more as part of a large, monopolistic government utility run as an agency; it had a very simple one and a very straightforward one: Make electricity out of its nuclear power plants. Make as much as it could as safely as it could.

**Mr Galt:** I think your comments are kind of interesting. We're seeing a similar thing, particularly in the LCBO stores in Toronto. Just because there's a threat of privatization, the customer service has improved tremendously, I'm told. It's just almost overnight, just because of this particular threat.

You're talking about continuing with nuclear energy and you're highly recommending it, from what I am hearing. Most of our debt in Ontario Hydro, as I understand it, 80% or thereabouts, relates to nuclear. We're now being asked to lay on more either debt or some sort of arrangement of this. Yes, I know a lot of it relates to firing up the fossil fuel plants.

Try to convince me that's a good idea. Why should we continue with something that looks like it hasn't performed? There was supposed to be a 40-year life expectancy in these plants. Poor management, they tell us. We've ended up with plants that haven't been properly serviced. You've got to convince me this is a good idea, to continue spending, maybe, good money after bad, if I might put it that way. You're going to have to work really hard.

**Mr Hunt:** All right, Mr Galt. Let me deal with this question this way. When you look at the cost of Ontario Hydro's recovery plan, the largest component in it is replacement fossil fuel. This replacement fossil fuel will go on until such time as, if you go through the recovery plan, the nuclear units have recovered and this additional fossil fuel is no longer needed. If you don't do the recovery plan, then you will be paying that extra premium for fossil fuel indefinitely because it represents the margin of difference between the cost of nuclear power and the additional, more expensive cost of the least most expensive fossil fuels.

In that sense then, you may say the recovery plan is expensive. What I'm suggesting to you is, by neglecting the nuclear power plants and relying on fossil fuel, you are looking at something far more expensive indefinitely. Notice that I don't refer to the environmental consequences of relying on these fossil fuels.

The second thing this touches on is the reliability of nuclear power plants over the long term. It seems to have become something of a vogue statement here: "If it's old, it's unreliable." Let me give you just a few examples. I could pull out dozens, but I'll give you just a few examples of utilities and old reactors.

I'm only going to deal with the reactors in the top 5% of the reactors around the world, the best-performing 5%, which is about two dozen reactors. For example, Switzerland has five nuclear reactors. Their second-oldest reactor is Beznau 2. It was commissioned in 1971. That makes it almost 30 years old. It had a lifetime capacity factor over all those years of in excess of 86%, and it's an old reactor. It's as old as Pickering unit 1.

**Mr Galt:** We're running about 50% in some.

**The Chair:** Thank you, Mr Galt. We'll proceed now, Mr Kwinter.

**Mr Kwinter:** Mr Stewart, you state that the Canadian Nuclear Association is a voluntary group of people who are interested in the nuclear industry, who have an interest in it, as opposed to interests in it. You state that it's a three-pronged effort: One is uranium, of which we are the world's largest supplier; medical isotopes — we're the world leader; and energy production through the Candu which was at one time, or maybe still is, the leading technology in the world. But you also say that you think with this recovery plan and with the attention, Canadians will be once again confident.

So we have a situation I don't understand where you, as an industry — which has your lifeblood really relying on putting forward the fact that this is the best technology, the most benign, the most cost-effective and everything else — could be sitting by watching what has been happening at Ontario Hydro. Maybe you've done something about it but haven't been terribly effective.

Let me give you an example. Just recently I've had to question the minister in the House about the fact that the TTC will not buy a bus that is manufactured in Mississauga. They've gone to New Mexico to buy it. That makes it virtually impossible for the company in Mississauga to sell buses because all a competitor has to say is, "Their



own municipality isn't buying them; why would you possibly buy them?"

It would seem to me, as an association that is made up of all of those who derive their very livelihood and their very business potential out of this industry, that you would be supercritical and be a watchdog to make sure this is the model for the world, so that when you're selling these to all these other countries around the world, you say, "You come to Ontario and we'll show you facilities that are not exceeded by anything in the world." Why would that not happen?

**Mr Stewart:** I'm not sure what the question is.

**Mr Kwinter:** The purpose of your organization is to promote nuclear activity.

**Mr Stewart:** That's right.

**Mr Kwinter:** We have Ontario Hydro, which for years has had a record of poor maintenance, poor life expectancy of these facilities. We've just heard from your colleague where he's quoting what's happening in Switzerland. You can't quote that in Ontario. When Dr Hare was here yesterday I asked him, "Is it a problem of maintenance and is it design?" He said, "It's a bit of both," that the alloys in the tubes weren't proper because it was new and they hadn't got into this thing.

What I'm saying is that you, almost of anyone, other than the citizens of Ontario who are looking for cheap electricity, have the greatest interest in making sure this is successful, that it is the absolute epitome of nuclear generation. Why has that not happened from your organization?

**Mr Stewart:** I think from the organization, in effect we have supported Ontario Hydro and really the member companies. Certainly even as part of the recovery plan, many, many of our members are going to be intimately related with Ontario Hydro in maintenance and on a contract basis, on a consultant basis and all of this in that recovery program. It's in our interests, absolutely, the whole Candu supplier network and right through the piece, that Ontario Hydro is a showpiece around the world in terms of nuclear performance.

**Mr Kwinter:** Yes, but you said "but not in Ontario."

**Mr Stewart:** No. I mean, it's in our interests that those reactors are of world-class performance in Ontario, no question.

**Mr Kwinter:** But when you started you said that the Candu reactor is a showcase, other than in Ontario, and Ontario has a problem.

**Mr Stewart:** Ontario has a problem in terms of its utilization right now, no question.

**Mr Kwinter:** And my question was, why did you as an organization not use whatever your lobbying influences are, whatever it is, to make sure that's corrected, because that reflects on your ability to market this particular facility?

**Mr Stewart:** I appreciate your comment, but I'm not sure it's really a question in the sense of what — we obviously do everything we can to support Ontario Hydro in terms of services and everything else, in terms of our member companies. They know the problems and they've

tried in many ways, shall we say, as you've heard ad infinitum in these hearings, on various recovery programs.

**Mr Hunt:** The way I would express it, Mr Kwinter, is this: The performance-related issues to which you're referring, which have been acknowledged to have been going on for some time — if the regulatory authority, the Atomic Energy Control Board, as was made manifest through the correspondence that was placed before you some weeks back, wasn't sufficient to get Ontario Hydro's attention, then I'm not sure what an industrial trade association could have achieved, particularly given the fact that Ontario Hydro was not a member of ours for a period of a year. You have to have some contact with the industry for the industry to have any influence over you.

**Mr Kwinter:** Could I just go on to another topic, because my colleague wants to say something as well. In your comments you said "there has not been any other type of large base load power generation plants started...either."

One of the things I have been informed of and what people who are saying there's got to be an alternative are saying is, it's a mistake to have these large base load facilities because when you have a problem with them, the whole thing shuts down. What is happening in North America, particularly in the United States, is people are building these smaller gas-generated turbines that are turning out power and you really spread your risk. If one of these things goes down, you can buy quite easily from some other area. The trend is to get away from that large facility because of the problems. Do you have comments on that?

**Mr Stewart:** Actually, I don't think I agree with that in terms of large base load, in terms of scale. Really, when you go back, there have been very few, even on a distributed basis. There have been a number of small gas turbine cogen and that will continue to be done on an isolated basis, on pulp mills and some of the other municipal levels. But when you look at the large base load of the scale you need to drive the North American economy, you still need significant base load capacity. The point I was trying to make there is, there has really been no significant need for new power generation because of deregulation.

**1140**

Maybe just to illustrate that a little bit, for instance, if Ontario Hydro were restructured such that it had open access to the US market, just for the sake of argument, we know Ontario Hydro has about 5,000 MW of excess capacity. So when they do solve these nuclear issues and everything, we're back to the issue of excess capacity in Ontario. But if you change the regulation and allow Ontario Hydro or whatever entity we end up with to go into the US to compete in an open market, you've in effect brought, just through deregulation, 5,000 MW of capacity into the US market.

That's happened throughout the US. When you go back 10 years in the US, there were a number of power plants planned and almost started to be constructed in the southeast US where the industrial development really was advancing, in Arkansas and Alabama and these places.

When you look at a lot of the plants that have not been built, including a lot of nuclear, in effect that power demand has been taken up by wheeling power from northern states where they've closed factories and don't have the base load any more. They've actually solved that problem through wheeling the power throughout North America. That's clearly what's happened in the industry.

**Mr Laughren:** I'm puzzled by your presentation, I must say. You indicate you're funded by basically people in the nuclear industry.

**Mr Stewart:** Yes.

**Mr Laughren:** What is your budget for your association?

**Mr Stewart:** The overall association budget would be probably just under a million dollars.

**Mr Laughren:** Are you registered as a lobbyist?

**Mr Stewart:** Yes.

**Mr Laughren:** In Ottawa?

**Mr Stewart:** Yes.

**Mr Laughren:** Anywhere else?

**Mr Stewart:** I think in other provinces as well.

**Mr Laughren:** I'm taken aback by your presentation, which is really a cheerleading presentation. Given the problems this committee is wrestling with, I'm surprised at your presentation. If I was a member of your organization, I think I'd withdraw my funding — I'm serious — because here you are as an association, a lobbyist, and yet when this committee is trying to wrestle with a very serious problem in this province, there doesn't seem to be an acknowledgement on your part that there's a very serious problem here for your industry.

There's no comment in here about safety issues at Ontario Hydro or in the nuclear industry. I don't know whether you talk to AECB or whether you appreciate the severity of the problems. I mean, there was CBC last night doing a — okay, you can say that flowed from the Andognini report and so forth, that's fine, but as a public relations exercise it's a disaster for you and there doesn't seem to be an acknowledgement of any of this. I don't find that very helpful to this committee, quite frankly. I apologize for speaking so directly, but I don't think you'd want it otherwise, would you?

**Mr Stewart:** Absolutely not. I have an equal concern as you do that we get this problem resolved, obviously.

**Mr Laughren:** But there doesn't seem to be an acknowledgement of it in your presentation to this committee. We're not interested in simply knowing that the Canadian Nuclear Association is cheerleading for the nuclear industry. We want to know what you're doing about helping to resolve some of these problems, because as Mr Kwinter said, there's a lot at stake here for this province, a great deal at stake. It's not just health and safety, it's economic as well.

**Mr Stewart:** That's right. I think what I'm trying to do is just advise you on making sure you look at all the facts and you look at nuclear energy and what's happening around the world and what other constituencies have done with nuclear power. I think it illustrates to you, I hope, that it is the problems that have been put before you by

Carl Andognini and his team. It is a long-standing, long-time-developing cultural management which at the end of the day has caused maintenance issues, which has hardware problems.

**Mr Laughren:** But we shouldn't expect, should we, that you're going to look at Ontario Hydro's recovery plan with any kind of objective view?

**Mr Stewart:** Oh, on the contrary, I don't agree with you. If this does not get recovered, shall we say, I think it has a profound impact on our industry.

**Mr Laughren:** No, I don't mean that. I meant in terms of the options. The recovery plan is a nuclear option only. We can't expect you to say that recovery plan is not a particularly good one because it doesn't consider non-nuclear options. We can't expect you to come to us and say that, can we?

**Mr Stewart:** There are milestones in this plan. For instance, Bruce A is not going to be opened without a financial business case to reopen. That's right in the recovery plan. Ontario Hydro is going to have to justify the investment in that plan and the reopening of that plant. I have no problem with the nuclear option being put to any test, financial or safety and this sort of thing, as it will have to be, to do the work. I think that's in the plan. I think it's based on a business case to do the work on that plant, so I'm not sure I agree with your comment that we're sitting back. We're helping them, obviously. I think we've got to mobilize everything to help them.

**Mr Laughren:** Why was Ontario Hydro not a member of your organization for, what did you say, a year or two years?

**Mr Stewart:** That was during the period when the NDP government had a policy of non-nuclear.

**Mr Laughren:** Of no nuclear expansion.

**Mr Stewart:** No nuclear expansion.

**Mr Laughren:** Hydro withdrew because of that?

**Mr Stewart:** That was the information we were told by Ontario Hydro, that they could not belong to an association that, in your words, promoted nuclear energy.

**Mr Conway:** Those were the days when minister's letters were really responded to.

**Mr Stewart:** There probably was a minister's letter somewhere.

**Mr Laughren:** That I find very strange.

**Mr Stewart:** That was a fact.

**Mr Laughren:** That was what they told you.

**Mr Stewart:** Yes.

**Mr Laughren:** It was only for one year?

**Mr Stewart:** I think it was a couple of years.

**The Chair:** We have time to go around for about three minutes each caucus and we'll start with Mr O'Toole.

**Mr O'Toole:** Thank you very much. I appreciate your presentation. I've a couple of quick questions, since I have two or three minutes. You support nuclear; that's obvious. Should nuclear be in public or private ownership?

**Mr Stewart:** I can give you examples. We can talk about Ontario, but on a global basis —

**Mr O'Toole:** British Energy is a good example of one.



**Mr Stewart:** There are perfectly well-managed and performing nuclear reactors in both forums. In France it's government-owned; it's world-class.

**Mr O'Toole:** World-class. That's good.

**Mr Stewart:** In other countries, it's —

**Mr O'Toole:** Since I've only got a short time, that's kind of the answer there.

The other one is culture. We've heard a lot about it and we've used different words meaning roughly the same thing. I'm reading your report. Actually, I must compliment you. It's a very nice document. I have to learn how to read it; there's a lot of technical stuff in here. I am impressed because under culture — it covers it on page 26. I'll just read it: "Over the years workarounds became a norm." "Workaround" is kind of a term of avoiding being fixed. "Staff worked around the problem by closing a manual valve that would allow operations to continue." Of course, they would turn the valves on when a test was being done. "It became standard practice simply to work around the procedures." It goes on to make specific references.

But you endorsed the safety — you sort of brought it in here — which I have some serious problems with. You said, "The nuclear power generation industry is the only large-scale power generation option for most industrialized and developing nations that totally contains its waste in a safe and effective manner." I think safety is a primary issue here and I think it must be addressed very technically, very specifically.

I bring to your attention that even Dr Jeffrey from BE just sort of skated around the ultimate disposition of waste, whether it's the fuel or the site, or it's the whole decommissioning process. Could you give me some assurance that there is proven technology for dealing with the waste? In nuclear, we don't have the particulates and the greenhouse gases to deal with, but we have not dealt with the byproduct. I'm not convinced — I've heard of the ceramic encasement. He said: "We just take the plant, we take down all the concrete, we chop up the boilers into little bits." I thought, "Yeah, sure."

**Mr Stewart:** I'm sorry, I missed his presentation. I was in Ottawa meeting with the AECB.

1150

**Mr O'Toole:** You should read it. Get the Hansard, read it. Really, he said, "You just chop it up into little bits, encapsulate it and you bury it." Well, there isn't anybody burying it anywhere. They're talking about it, we're looking at it, the deep core stuff in the Shield. Sweden's the only country that's doing anything and they're at medium activity storage underground. Just give me some assurances, for the record, that safety — that's the longer-term issue of the output of nuclear — is resolved.

**Mr Stewart:** Certainly. Actually, when you go to the sites I would stress that you do look at that back-end fuel cycle.

**Mr O'Toole:** Bruce has the above-ground storage.

**Mr Stewart:** As the fuel comes out of the reactor it goes into the so-called swimming pools. It sits there for anywhere from a few years up to 10 years. It is now

decayed down to some extent. It is now in Canada, and actually around the world the norm now is to put it into what is called dry storage. You will see those dry storage facilities on your tour at Ontario Hydro. You will see a slightly different version at Gentilly. I was standing beside them in Korea three weeks ago. You can stand beside them. You can go up and touch them.

**Mr O'Toole:** That's high-level storage.

**Mr Stewart:** This is the high-level storage of the waste. They go into this so-called dry storage, which is a totally satisfactory technology that is, in effect, valid for hundreds of years.

**Mr O'Toole:** What is the radioactive life —

**The Chair:** Thank you, Mr O'Toole.

**Mr O'Toole:** A thousand years?

**Mr Stewart:** Longer than that.

**The Chair:** Thank you, Mr O'Toole. That was your slip-in and that's the end of that one. Mr Conway.

**Mr Conway:** It's an Irish problem, Mr Chair.

**The Chair:** It is indeed, Mr Conway.

**Mr Conway:** I will proceed with a great deal of trepidation.

**The Chair:** It's genetic.

**Mr Conway:** I want to thank you for your presentation, Mr Stewart and Mr Hunt. I'm sorry I was out for part of it. I want to really deal with one issue. I have been one of those people around this place who has always supported the nuclear option. But I must say, on August 12 or 13, to see the chairperson of Ontario Hydro, a big nuclear player, stand up in public and say the things he said about the problems at Ontario Hydro Nuclear; to hear Al Kupcis, a very fine fellow who has long associated with the industry, come before the committee a few weeks ago and say — my words, not his — "Yes, I agree with Andognini that it's robust technology." He said, in effect, it was a technology that we couldn't manage. To hear Ken Hare yesterday make the point that there were design problems that weren't anticipated or perhaps weren't properly recognized — when I take all of that together, as someone who has been a supporter, and who still is, for reasons that are not always popular, even I recognize there is a very serious credibility problem facing your association.

I understand Mr Laughren's point. What Hydro has done to you, it seems to me, is akin to Air Canada saying in public, "We have grave concerns about the Airbus," or about the Boeing product line. "We're laying up most of our Boeing fleet or our Lockheed fleet because it's cult-ridden and a variety of other things." To the average person looking at that, that's pretty disturbing. I wonder if you have any advice to the committee as to how that credibility problem might be dealt with.

**Mr Stewart:** Could I answer that in a little anecdote?

**Mr Conway:** I always like anecdotes.

**Mr Stewart:** In a slightly different way — you remember August 13 was the date.

**Mr Conway:** Yes.

**Mr Stewart:** I just happened to be at Gentilly 2, which is Hydro-Québec's Candu reactor. I gave a presentation to

a lot of the staff there on the 15th, two days later. In the presentation I was asked I don't know how many times as I walked around the plant, by workers and what not, "Do we have the problem here?" They'd read all the sort of — "What's so difficult about managing and running a nuclear plant?" This is a plant that runs extremely well. They don't have the problems. But they were quizzing: "What's wrong? How could this happen?" It's sort of the old, "Tell me it ain't so, Joe," kind of thing.

I think it illustrates that it is a management issue. It's a cultural issue that's developed in Ontario Hydro in the total package of Ontario Hydro, and this has to be addressed. I urge you to understand that, to understand all aspects of Ontario Hydro, from the Power Corporation Act right down to every aspect of Ontario Hydro, so you actually end up coming away with a visceral understanding of what really did go wrong; even again to suggest maybe you have to go and visit some other places where Candus —

**Mr Conway:** We're not allowed to do that.

**Mr Stewart:** Oh, you can't do that.

**Mr Conway:** Bill Morison and some of those very fine people at Ontario Hydro came before an earlier version of this committee 15 or 20 years ago, and again, my words not theirs, but they left the very distinct impression that these plants in Ontario could no more have these kinds of problems than I could have a baby.

**Mr Stewart:** It has been said as well, if this had been known, Candu technology would have been here five years ago.

**The Chair:** Thank you, Mr Conway. The imagery is beyond words.

**Mr Conway:** I was calling upon my favourite mayor of Montreal. I was trying to be cosmopolitan.

**The Chair:** Thank you very much, Mr Stewart and Mr Hunt. We appreciate your attendance upon the committee and we appreciate your testimony. If we have cause for any further information, I hope you'll respond as forthrightly as you have today.

**Mr Stewart:** I'm always at your disposal. I came back from Ottawa to meet you today and I can come back any other time.

**The Chair:** I appreciate your timeliness and your presentation. Your testimony is concluded for today. You're excused. Thank you very much.

Members of the committee, that will conclude the testimony for this morning. The committee will adjourn until 1400 hours and it will meet again in this room. That's at 2 pm, for Mr Conway.

*The committee recessed from 1156 to 1405.*

**The Chair:** We will now begin the committee for the afternoon session. To remind those who are watching us on the legislative channel, at 2 o'clock the witnesses are from the Ontario Natural Gas Association, at 3 o'clock the Independent Power Producers' Society of Ontario, and that will conclude the deputations for this day.

On Monday we will resume deliberations and briefings with witnesses here in room 151 at 2 pm. Then we'll update everybody on the agenda at that point.

## ONTARIO NATURAL GAS ASSOCIATION

**The Chair:** I have before me the Ontario Natural Gas Association, Bernie Jones, a consultant, and I have a number of other names before me. Perhaps, Mr Jones, you will introduce yourself for the purpose of Hansard and we'll then identify everybody else at the witness table.

**Mr Bernie Jones:** Perhaps I could have Mr Pinnington make the introductions, please.

**Mr Paul Pinnington:** My name is Paul Pinnington. Good afternoon to you, Mr Chairman, and to the members of the panel. I'm the president of the Ontario Natural Gas Association. My fellow panelists are Bernie Jones; Mr Juri Otsason, from the Consumers' Gas organization, and his expertise is in transportation and development; and Mr Bruce Rogers, who is responsible for major industrial markets, from the Union Gas organization.

I understand it's the committee desire that we limit our opening statement and have most of the hour for questions and answers. As you know, we are here on rather short notice. We plan to provide you with a formal statement of our position in the near future and we will be pleased to include in this document more detailed information relative to today's session, should it be required.

It is our submission that there are viable electricity supply-and-demand alternatives to those proposed in Ontario Hydro's August 1997 nuclear recovery strategy. The restructuring of electricity markets in Ontario will have a very significant impact in this regard. Among the alternatives, natural gas options represent the largest potential. They are economically viable and environmentally preferable to increased coal- and oil-fired generation and could be competitive with nuclear refurbishing, depending on cost assumptions.

Natural gas technologies offer substantially greater energy efficiencies than coal- and oil-fired central generation. They can be put in place in a relatively short time. They can also be sized to meet specific demand and located where the power is required. The substantial environmental advantages of natural gas versus coal and oil are widely acknowledged.

Natural gas technologies are safe and reliable, with proven performance. They include the use of gas at existing Hydro thermal stations, gas turbines, combined cycle and cogeneration. In a competitive electricity system, all competing alternatives would be considered and the marketplace would determine supply, demand and price.

With respect, we submit that it will be difficult for this committee to complete its assigned task, including the assessment of demand and alternative energy electric supply options, without direction from the now long-overdue government white paper on electricity restructuring. Premier Harris has promised to provide this document and we urge this committee to press for its release on an urgent basis.

These are our opening remarks. We are now in your hands.



**The Chair:** We will begin the questioning by caucus in rotation.

**Mr Galt:** It's — I've lost track.

**The Chair:** I appreciate that, Dr Galt, but we are actually beginning this round with the opposition party. I appreciate the advance notice that Mrs Johns will be the first speaker. We'll begin with Mr Kwinter.

**Mr Kwinter:** Mr Pinnington, one of the things we have been wrestling with since we began this is a confusion as to what direction the board took on their recovery program. We had a letter from the minister saying they should examine all options, and we have had members from the board — not all members; three members of the board have been here — and two of them have said their interpretation of that, and I think the perception of most of the board, was that the letter really directed them to look at the six options Mr Andognini put forward, which were all nuclear.

We had another member of the board, who also happens to be the president of the Power Workers' Union, who said his perception was that had he got that letter in time, it really meant they should be examining all options. Within that context, I get the impression from what I've heard to date — notwithstanding protestations by members of Hydro, "We will monitor this on a monthly basis and make adjustments accordingly but only within the confines of nuclear" — that the decision has already been taken and that the request for proposals is only for the replacement energy. I'm just giving you that as a bit of the background of my perception of what is happening.

What I'd like to know, because I have also heard that if we were to go an alternative route, that is to go to gas, there would not be sufficient capacity in the pipeline to get the gas here to replace the nuclear if you went all nuclear replacement, which I don't think is going to happen, what is the whole issue of security of supply, availability, time frames and things of that nature?

**Mr Pinnington:** I would first say that we are not familiar with the detail of that letter, so any comment we would make is not in reference to the letter. Certainly it's our very strong opinion that the alternatives to nuclear must be considered by this panel.

With respect to the question of long-term secure supplies of natural gas, there is abundant documentation, and I would cite in particular Natural Gas Market Assessment, produced in June of this year by the National Energy Board. I would be prepared to leave a copy of this with your counsel. It indicates that there is a secure long-term supply of gas, and the question of getting the gas from the western sedimentary basin, primarily the province of Alberta, to Ontario is really a mechanical question related to the length of time for acquisition of pipe and compression. The information we have at this point in time is that for significant additional large volumes of gas a two-year period, in round numbers, would be appropriate. So from the time you indicate a need for a very substantial increase in gas, it would take approximately two years to put the facilities in place.

I would like to ask Juri Otsason to elaborate. This is his area of expertise.

**Mr Juri Otsason:** If I may add to that, certainly in terms of gas availability in North America, and in western Canada in particular, there should be no concern about supply. The industry has gone through a number of cycles as supply and demand get out of sync. The producing sector is able to adjust to that very readily, particularly as a result of a lot of advances in technology. In fact finding costs for gas if anything are coming down, so an increase in demand doesn't necessarily mean an increase in cost of the commodity itself.

From the Ontario perspective, there is also going to be a new supply source off the east coast that will potentially be available. There is the Sable Island gas that is proposed to be brought on stream in 1999, and if the pipeline route that is used to bring that to market ends up being — there are two proposals on the table — the Canadian route, that would provide another source of gas for Ontario. In addition, the whole North American gas market is very integrated, so we're not really limited just to Canadian supply. There's also the ability to source gas from the US, from the Gulf Coast or mid-continent areas in the US. Again, there's been some great success in terms of finding additional supply there. So bottom line: Commodity supply is not an issue.

In terms of transportation, Mr Pinnington mentioned a two-year lead time for adding large amounts of incremental capacity. There are a number of large pipeline projects in progress to bring additional gas from western Canada towards the east, in particular towards the Chicago area. Those projects will proceed. A lot of that capacity is not necessarily dedicated to an end-use market at this point in time, so there is an ability to access some of that transportation capacity, which will be available in late 1999 to bring gas potentially to Ontario for power generation. In the interim, there is an ability for smaller quantities of gas to be made available for power generation, but large amounts would need roughly a two-year lead time.

**Mr Kwinter:** In the presentation this morning by the Canadian Nuclear Association, one of the points they made was, "There have been no new nuclear plants ordered in Canada or the USA in a decade, but there has not been any other type of large base load power generation plant started either." The implication was that the only real alternative was the nuclear. Do you have any comments on that? Are you aware if that is a true statement or if there are some large base load, gas-fired energy plants?

**Mr Bruce Rogers:** What I'd like to describe there is that over the last 20 years in Canada, right in Ontario, there have been about 1,600 megawatts of independent power brought on line. Most of that has been brought on since about 1989 and 1990. Those are large gas-turbine-based, combined cycle plants. What they represent in total at 1,600 megawatts is about three quarters of what you would see at one of the large coal-fired plants, say, at Lambton, which is 2,000 megawatts. Over the last period

of time, gas-fired combined cycle cogeneration has been the incremental power produced. That produces, as I understand, about 10% of the electricity used in Ontario today.

Citing how far back that goes, 20 years ago Dow Chemical put the first 150-megawatt plant into the Sarnia area, so the technology has been around for a number of years. It's grown over the last decade, and certainly if you look at North America, there is in the order of 100 times that amount of gas-fired technology in place and is growing throughout the world. Gas technologies, particularly those that would relate to turbines, are well-known. The companies that provide the equipment are Westinghouse, General Electric, Asea Brown Boveri, very large, well-known companies. The technology is proven. In fact, the efficiencies have improved dramatically over the last five years, which makes it more economical to use to make natural gas. I would say there's proof-positive. We could certainly follow up, if you need it, with documentation on that.

**Mr Pinnington:** Could Mr Otsason just add one additional comment?

**The Chair:** Just very briefly, please.

**Mr Otsason:** You made reference to large-scale power generation. There's one example in New York state. There's a 1,000-megawatt gas-fired cogeneration facility or turbine cycle plant that went into place about two or three years ago owned by Sithe Energies. It's a very large-scale plant and it's in operation and functioning well.

1420

**Mr Laughren:** When we talk about the gas-fired turbines, are they basically like a large jet engine? Is that what they are?

**Mr Rogers:** Yes, that's correct.

**Mr Laughren:** Are they available off the shelf? That may be a strange way of putting it, but can you buy them off the shelf?

**Mr Rogers:** Yes, the lead time is about 12 months.

**Mr Laughren:** It's that long.

**Mr Rogers:** The reason they're so available off the shelf is that they are widely used in North America. Certainly over the last five years gas-fired cogeneration has been on hold in Ontario and in North America, but in the emerging Third World countries that's the quickest and the easiest way to generate electricity where gas is indigenous to that area. That's why the efficiencies have come up so high. So many machines have been purchased that a lot of R&D money is being poured into these gas turbines. They're very well known and widely used, very reliable.

**Mr Laughren:** Forgive me if I use a hypothetical situation here. If, for example, it was determined that the nuclear option at Bruce at the end of the day was seen to be uneconomical or too difficult, or whatever reason, for the Bruce A. The transmission lines are already in place, right? How long would it take the suppliers, people like you, I guess, to drop into place those turbines to make up the shortfall from Bruce A?

**Mr Rogers:** We tossed around the number of two years as being certainly the technological lead time and probably the lead time to get gas transportation and transmission capabilities there and, as Mr Otsason said, get the capacity all the way back to Alberta or wherever the gas would be sourced.

It's not really inconceivable, particularly when you have an infrastructure there that's set up and ready to be what we call repowered. You already have a boiler that could receive the steam from the combustion gas turbine. The question would be siting. There would be some complexities, but two years is, in my mind, the fastest you'd be able to do something like that.

**Mr Laughren:** What length of contract would a supplier need to be interested in that?

**Mr Rogers:** That's a very interesting question. A gas-regulated utility would simply have to look at that on a cost-to-service basis, and we would determine, based on the needs, what the capital costs were and then put that back into place. Depending on the term, whoever the owner was, whether it was Ontario Hydro or an independent owner, whatever the terms and conditions and the annual gas volumes they would sign up for, that would be applied in the normal way and come out to an economic decision. At the end of that there are two ways you could go. Someone can sign a contract that covers the costs and there are no incremental charges. The other way you could do that is by paying what we call in the industry an aid to construct. That's a capital investment that makes up the difference so that the project is deemed economical.

So there are two ways. You can either take a long-term contract with a certain level of volumes or you can take a shorter-term contract but provide backstopping to the capital that's not covered by that deal.

**Mr Laughren:** You mean somebody else pays for it?

**Mr Rogers:** Whoever the owner is would in fact —

**Mr Laughren:** Right. But if that wasn't the case, what would be the minimum length of contract you could imagine if there was no aid to construct?

**Mr Rogers:** It really would depend. We could undertake some scenarios for you, but you'd really have to look at the —

**Mr Otsason:** Maybe I can try to answer. First of all in terms of one significant component, which is getting the gas from the supply base into Ontario, you would typically look for a 10- to 15-year commitment, and it will depend on how the electric industry is ultimately regulated in Ontario.

What is happening in many jurisdictions in the US is that there are investors or parties that are willing to build merchant plants that are not necessarily relying on any long-term contractual arrangement with the electric utility. They are relying on being able to produce power at a competitive price and sell it on the open market. If we get to a fully open electricity market in Ontario, that is something that is very much a possibility.

**Mr Laughren:** Should we be fearful about the potential increase in the price of natural gas?



**Mr Otsason:** As I indicated before, I don't think that is really an area of concern. There will be fluctuations in price. Gas is traded as a commodity in an unregulated market now in North America, so supply and demand drive it. But I think the key factor is that the finding costs and development costs for additional supply are flat, or declining slightly in the case of western Canada, so there are no fundamentals that would suggest there should be an ongoing upward trend in price. I think the price for gas in western Canada right now is artificially depressed because there are limitations on pipeline capacity out of the western supply basin. So there will be an increase in the price of gas in western Canada once the pipelines go in place, but it will level out, and I don't expect a long-term trend of increasing prices.

**Mr Laughren:** Hydro has already put out some requests for proposals for interim supply of energy, have they not?

**Mr Rogers:** Yes, that's our understanding. My understanding is that it is not for incremental capacity but for incremental energy deliveries. That is the electricity itself as opposed to incremental plants to generate the electricity. What I'm saying is, they're not putting out RFPs for more plants or for incremental generation. They're asking for people to come forward and offer up alternative energy sources. Whether those are imports or generated or from whatever —

**Mr Laughren:** Fossil or whatever.

**Mr Rogers:** Exactly, from whatever.

**Mr Laughren:** I wondered whether or not your association or members of your association had looked at those proposals with an eye to responding.

**Mr Rogers:** Again I would say that those are basically up to the independent commercial players in that field or the industrial companies, for instance, that presently have independent power production on their sites. That's one area that certainly could potentially increase the capacity.

If we look at that 1,600 megawatts of independent power, it has been used on average in probably 50% to 60% of what its total capacity is. Now that the nuclear stations are potentially going to have to be refurbished, those stations, for instance, those gas-fired independent power plants, could be used to a much higher degree. The capacity is there. The long-term transportation to get gas to Ontario is there. It's simply a matter of ramping up and using more energy and increasing the load factor at those plants. That to me seems a logical place for part of the response to that RFP.

**Mrs Johns:** I just have to go back a few minutes to understand, I think. Do all of you represent pipeline people here as opposed to people who would actually put the turbines together and move forward to produce the end product, which I would call electricity?

**Mr Pinnington:** We're primarily on the transmission and distribution side of the business, although we have manufacturing members who produce some of this equipment. The next group, the independent power people, are involved more.

**Mrs Johns:** Right. You're transmission and distribution and the independent power produces are generators.

**Mr Pinnington:** They'd put the facility in place.

**Mrs Johns:** I just want to ask you some questions. Basically they're pretty much yes/no answers. Do we have any natural gas resources in Ontario?

**Mr Pinnington:** Very little. About 1% of the total consumption in Ontario is from the province.

1430

**Mrs Johns:** Do we have the pipeline capacity to be able to bring more natural gas into the province at this particular time?

**Mr Otsason:** Not for large incremental amounts, but as I indicated, there is already activity under way, in other words, in terms of seeking regulatory approvals, doing all the design and so on, to add additional capacity.

**Mrs Johns:** Got that. How much capacity comes in from outside of Ontario right now? How do you measure that? Pipelines full, buckets?

**Mr Otsason:** In terms of capacity, the way you measure it is per volume of gas per day that can be transported.

**Mrs Johns:** How much volume of gas comes in from outside the province right now in a day?

**Mr Otsason:** Into Ontario, peak capacity would be something in the order of two billion cubic feet per day.

**Mrs Johns:** With the pipeline capacity we have right now, how much could we go up to?

**Mr Otsason:** There isn't a simple yes or no answer to that.

**Mrs Johns:** I need that.

**Mr Otsason:** There are markets that are using that capacity right now that potentially have other options. They can source gas from the US, out of storage or they can burn alternative fuels like oil. There are a number of gas users that have the ability to switch back and forth.

**Mrs Johns:** But that shouldn't affect the answer to my question. I want the capacity that can come in through those lines, so I don't care who uses it. You tell me that the capacity coming right now is X. I want to know what Y is, and Y, to me, is how much more you can shoot through those lines to bring into Ontario.

**Mr Otsason:** That capacity is essentially fully utilized right now, but not necessarily to serve end-use markets in Ontario. It might be moving through Ontario.

**Mrs Johns:** Got you on that issue.

**Mr Pinnington:** You should recognize that during the peak demand period in the winter, about half the gas used in Ontario comes out of storage in the province. So we basically run the pipeline full out as much as possible and any gas that isn't being used goes into storage for the peak winter season.

**Mr Rogers:** The other point is that it is a seasonal pipeline operation to the extent that during the summer, while two bcf, for instance, come in from out of the province, the total capacity from the Union Gas system, which is down near Sarnia, through to Toronto is basically twice that. So during the summer months, essentially

through brokers and marketers and commercial arrangements, you may be able to access gas that otherwise would not be available. It isn't quite as simple as the pipeline capacity itself. You'd have to look at the commercial arrangements.

**Mrs Johns:** You've managed to really confuse me, but that's okay, I'll read over Hansard and I'll see if I can figure it out.

Obviously, I think you've told me, that if I was going to try and do more to look at alternative fuels here and to look at gas generation, I would have to put some more pipelines in the ground.

**Mr Otsason:** That's right. For large-scale additional volumes, yes.

**Mrs Johns:** I have heard that it's a horrendous dollar value for us to put electricity lines in from the US and from everywhere else. Can you tell me the price of putting in a pipeline per square foot, mile, however you do it?

**Mr Otsason:** The cost of incremental pipeline capacity to move gas from western Canada to Ontario would be something in the order of \$1.10 per 1,000 cubic feet of incremental capacity.

**Mrs Johns:** Okay. I could work that out. All right.

**Mr Rogers:** But was your question how much per mile?

**Mrs Johns:** I really wanted to know per mile.

**Mr Otsason:** A large-diameter pipe, about \$1 million per mile.

**Mr Rogers:** Yes. A million a mile is a good —

**Mrs Johns:** Whew. Okay.

**Mr Rogers:** With the ability to place that, probably, in the ground in two years.

**Mrs Johns:** I got that.

**Mr Rogers:** The question would be, if you tried to move electrical transmission, you may have a much more difficult time.

**Mrs Johns:** Cost of a gas turbine itself?

**Mr Rogers:** Roughly \$1 million per megawatt.

**Mrs Johns:** Cost per megawatt of gas-produced power, capital cost and installation included?

**Mr Rogers:** That's what I'm saying —

**Mrs Johns:** No, I mean per kilowatt-hour, however I'd get it on my electricity bill.

**Mr Rogers:** A very large-scale 200-megawatt plant, what we call a merchant plant, probably between three to three and a half cents per kilowatt-hour.

**Mrs Johns:** All costs in?

**Mr Rogers:** Everything in. That's based on \$3 per mcf, delivered price for gas, and that's what Juri is saying should stay flat for the reasons he described.

**Mrs Johns:** Is the futures market in natural gas right now stable or fluctuating?

**Mr Otsason:** It's fluctuating in the near term. If one looks at the futures market, the near-term pricing is volatile but you can go out and lock in long-term pricing, if you desire, through the futures market, and the further-out pricing tends to be relatively stable.

**Mrs Johns:** If the province were desperate to have this and we did a better job of reducing red tape, not elimin-

ating all environmental concerns but eliminating the red tape that may be associated with this, is two years still the answer to your time frame?

**Mr Rogers:** You could probably shorten that by six months. Perhaps the Independent Power Producers could comment on that when they come up as well.

**Mr Otsason:** I think on the transportation side, though, since transportation would be under federal jurisdiction or in some cases US jurisdiction —

**Mrs Johns:** The red tape would still be there.

**Mr Otsason:** Yes.

**Mr O'Toole:** Storage capacity. Is there any chance of increasing storage capacity in Ontario?

**Mr Otsason:** Yes. Consumers' Gas is expanding its storage capacity, Union Gas I believe is expanding its storage capability and there is also some very significant potential for incremental storage just across the St Clair River in Michigan. So there's lots of potential to expand storage.

**Mr O'Toole:** Would that help the seasonal offsets for volume controls?

**Mr Otsason:** That would help, although I think one comment I would have on that is that the gas demand we have right now in Ontario and in eastern Canada tends to be very much winter-peaking. The electricity demand has a summer peak as well as a winter peak, so I think there are a lot of opportunities for some synergy to realize some efficiencies if you get more gas use for electricity generation.

**Mr O'Toole:** Summer.

**Mr Otsason:** Yes.

**Mr Galt:** I wanted some clarification. This is not steam production, this is a direct-driven generator, a turbine —

**Mr Rogers:** What the turbine does, the turbine is driven with natural gas. The turbine then puts out high-pressure, high-temperature steam as one of the products. The other product is to direct-drive a generator and make electricity. So you get two energy outputs for the price of the one energy input. That's what makes it so highly efficient.

**Mr Galt:** Being concerned about the environment — the efficiency of gas you told me has improved considerably. What kinds of pollutants are you putting out or controlling with your current, up-to-date turbines?

**Mr Rogers:** If you look at the efficiency of that combined cycle, large efficiency turbine, it's about 80%, if you indeed use the steam as what we call an industrial steam host. Also, from a NO<sub>x</sub> point of view, the turbines today are designed to come in well below the 25-parts-per-million NO<sub>x</sub> standard. That is dramatically lower than you would get with coal or oil. If you compare it to coal, it also reduces SO<sub>2</sub> emissions, CO<sub>2</sub> emissions, and there are other technologies that you can actually apply at coal-fired plants today.

**Mr Galt:** This is without scrubbers. This is just straight burning.

**Mr Rogers:** This is just straight burning. If you take a coal plant today, for instance — take Nanticoke as an



example — you could apply what we call coal firing, 20% natural gas, 80% coal, that will dramatically reduce NO<sub>x</sub>, SO<sub>x</sub> and CO<sub>2</sub> emissions.

**Mr Galt:** So the VOCs is down, and the particulate matter?

**Mr Rogers:** Sure. Whenever you put gas in, there are absolutely no particulates associated with it.

**Mr Galt:** So it is clean.

**Mr Rogers:** Yes.

**Mr Pinnington:** We have some detailed information in that regard which we can leave with you, Dr Galt.

**Mr Galt:** Thanks very much.

**The Chair:** Mrs Johns, just by way of my notes here: Your new measurement function of pipelines full, do you want that in metric or imperial?

**Mrs Johns:** Metric —

**The Chair:** You can just send me a note and I'll have the staff working immediately on that.

**Mrs Johns:** I'm a newly trained person.

**The Chair:** I'm teasing you, of course.

I've been passed a note. The visitors from across the world are now attending upon the committee. I have the great pleasure, and Mr Laughren has reminded me, and happily he has, of a visit by Mary Ann Mihychuk, who is a member of the Legislative Assembly from our sister province of Manitoba. We welcome her to the committee meetings today. Welcome.

We turn now to the opposition caucus.

**Mr Conway:** If Manitoba is halfway across the world, I hate to think what we'll tell the Saudi royal family when they arrive here.

1440

I have only one question, gentlemen, and it goes back to a discussion I remember having with, I think, some of your association members a couple of years ago. That had to do with the pricing of natural gas in the marketplace and the market share of gas vis-à-vis oil, particularly in the American context. I remember somebody from the gas association, I think, telling me that one of the disciplines in the American marketplace was that gas and oil were linked in some way. Do I remember that conversation?

**Mr Pinnington:** I expect you and I may have had that discussion and it may have been back around 1985, because prior to then the government fixed the price of natural gas. There was a direct linkage between gas and oil at that time, and had been since 1974, I think.

**Mr Conway:** Is there any relationship now?

**Mr Pinnington:** Not but in the competitive market, I don't think.

**Mr Rogers:** In the competitive marketplace, what you'll see are posted rack prices for oil and posted prices for gas, but when you get into the very large industrials, you'll get into spot pricing, you'll get into lower-priced, large volume commercial discounts.

**Mr Conway:** One of the reasons I raise this is that I think you people, not just today but on other occasions, have made a very strong presentation. You're obviously going to play an ever more important role in the energy future of this jurisdiction and others across North

America, but you, yourselves, indicated a while ago that in a sense, certainly in terms of gas, it's a continental market.

I've had an interest in the energy business for some time, and looking back over 20 years, the one thing about the energy world that I've always enjoyed is that the future has never developed the way it was supposed to. That's not a surprise, I suppose.

We've got a situation today where a lot of people, a lot of very smart people, seem to be basically saying the same thing, that most new capacity or a good bit of the new capacity, certainly in the eastern half of North America, is going to be gas-fired. That seems to make sense. My question then is, that is obviously going to put additional stress on the supply, but you say supply is not going to be a problem and you know the situation better than I. I'm a natural gas consumer and I've just been noticing that the price is starting to reflect this, if my bills over the last eight to 10 years are any indication, but they may not be.

But we're going to get ourselves into a continental situation, particularly in this gas business. When I see the Californians and the people in Nevada, they are very interested in that British Columbian and western Canadian gas, and getting more interested all the time. So there's going to be a very strong continental pressure. I'm just wondering, particularly on the price side, what's going to happen when a lot of utilities start to march in the same direction, at roughly the same time, from Nova Scotia to New Mexico, to commit new capacity, much of which is going to be gas-fired. You don't think there's going to be a problem, certainly not in supply. Where are you on the price issue?

**Mr Pinnington:** Just in a general way, just historically again, to go back, probably in the last 10 years exports of gas from Canada to the United States have gone from something in the order of 700 bcf or 800 bcf a year to about three trillion cubic feet a year, so we're looking at a factor of four, and we haven't seen any drastic change in the price. I don't know what your exact home circumstance is, but I think the price of natural gas at the residential level has been basically flat for at least 10 years or more. So we don't have an expectation of any very serious increase in price.

**Mr Conway:** But there are a lot of utilities that are going to be looking at not only new capacity but replacing old capacity, and there are presumably tens of thousands of megawatts there.

**Mr Rogers:** There are two things from a market point of view. First of all, as Mr Otsason said, the costs of finding gas have dropped dramatically over the last five years or so. The technology improvements have driven those costs down. In addition, there is the ability to draw from wells that were previously left partially emptied; the technology now allows producers to go back and pull out the rest of the gas. So the costs of producing the product are lower.

If you then move to the next biggest cost, transportation, as Mr Otsason said, there are a number of new pipelines being considered and in fact before boards right

now to bring Canadian natural gas over and into the Chicago area. That's the cost side.

On the other thing that's going to drive it, the price side, I guess we believe there's convergence that's going to happen in the North American market, particularly not so much oil and gas — that's always been there — but electricity and gas. The deregulation of the electricity industry is likely to end up in electricity prices being contained. That is one of the major factors, from a market point of view, that is going to dictate what the cost of gas can be. So there will be pressures on our business, as a group of players, all the way from the west to Ontario, to compete in that.

**Mr Conway:** I don't mean to be as dubious as I sound, because this is very comforting. I will keep this testimony and I will sleep on it knowing that it's going to be bright. On the energy sector, when I get this kind of comfort level and this kind of unanimity and this kind of certainty, if I've learned anything from the past, that's when I should get a little bit worried.

**Mr Laughren:** I have a question too. I want to go back to the recovery plan Hydro has put forward, which is basically to lay up seven reactors and use temporary power, largely from fossil, presumably, the coal-fired places, with the assumption that at the end of the day the A units at Bruce and Pickering will be brought back into the system, into the grid. You can see why Hydro, particularly its nuclear division, would want to do that. I'm wondering whether you have had a chance to look at that recovery plan, and second whether you have the expertise — it's amazing what you can get when you hire good consultants — to help you figure out whether there is an alternative to that recovery plan and what your role in it would be.

**Mr Pinnington:** Are you asking us if there's a role for the natural gas industry? As far as the specifics of the nuclear facilities themselves are concerned, we're certainly not skilled. When you look at numbers such as \$5 billion to \$8 billion, the data Hydro has produced, I guess in a broad, general way we feel quite confident that there is plenty of room for natural gas to be competitive with those costs.

**Mr Laughren:** I should have been a little more direct in my question. When I look at that \$5 billion to eight point something billion dollars, which basically would leave us — part of that is replacement fuel, I appreciate that, but still those are incremental costs to the system. What I'm wondering is what that kind of money would buy you out there, or buy us as ratepayers, on a permanent basis.

**Mr Pinnington:** In terms of replacement by natural gas?

**Mr Laughren:** In terms of supplying power on a long-term basis to the grid.

**Mr Rogers:** Just to put it in context, if you look at the technical potential that still remains in Ontario, and we talked about high-efficiency cogeneration, there's about 1,500 or 1,600 megawatts that is on site, and there is at

least another 3,000 megawatts of what I would call large cogeneration potential.

**Mr Laughren:** That would replace all of the seven units, wouldn't it?

**Mr Rogers:** That's technical potential in terms of merchant plants which would not have to consider providing any steam to any industrial steam host or any other application. The number goes up from there. From the nuclear point of view, certainly refurbishing the nuclear plants for \$5 billion to \$8 billion is an option. The other option we would like to see at least considered as an alternative is, what would be a strategic option for gas to play in some or all of that arena?

1450

**Mr Pinnington:** Maybe I can help you with a ballpark number. Over the past number of years, Hydro has been marketing power to the United States at a "marginal" price that we understand is somewhere around two and a half cents a kilowatt-hour. If in fact they're going to spend, say, in big, round numbers, \$5 billion fixing those facilities, we don't know exactly how much that's going to add per kilowatt-hour. But for half a cent more than two and a half cents, namely, three cents, we're in the cogen business. If their prices go up more than half a cent on a marginal basis, we're very much in business. That's why we're pretty confident that cogen has a role to play.

**Mr Laughren:** Maybe you missed the other part of their commitment, which was that rates would not go up as a result of this \$5 billion to \$8 billion. If you think that's magic, you're wrong, because what they would do, they tell us, is put it off into the future and capitalize it and repay it over a longer term. I'm just telling you what their position is. What I was trying to get at was — some of us are very sceptical, and we don't know enough either. At least I don't; I shouldn't speak for my colleagues.

**Mr Pinnington:** The debt-equity ratio is already such that may be difficult.

**Mr O'Toole:** If I may ask one or two small questions, are there any reasons to be alarmed or concerned with respect to the capability or technical features of the pipelines themselves? I've read recently of some stress fracturing and other issues that may be a concern from an environmental and safety perspective. Could you comment on what's going on right now with the industry.

**Mr Otsason:** Yes, I think I can do that. I think you're referring to something called stress corrosion cracking. That is an issue with some old vintage pipelines built back in, I'd say, the early 1970s with a particular type of pipe and coating. It's limited to that. The National Energy Board had a very thorough review of it. There have been some mitigation measures implemented with respect to that vintage, that type of pipe in particular. With respect to any other gas transmission pipelines, I think their safety record is excellent. With the new materials and new coatings, corrosion problems are not an issue. From a safety and reliability standpoint, I think there's a lot of evidence that the gas transmission is very reliable.

**Mr O'Toole:** I'm going to share the rest of my time, but I have one small question here. We've kind of all



agreed that for the base load we need to have nuclear. There's a lot of investment, but we've got some peaks to take care of. I'm interested in your views on two issues. First, is nuclear a major player in this? It's 60% now. What's your expectation? Should Ontario Hydro be held in public or private ownership?

**Mr Pinnington:** Let me answer the last question first. We've not taken a position on public versus private ownership. Our major concern is that we get on with the process of restructuring. I think the marketplace will ultimately determine whether it's best being publicly or privately owned. I don't think that's an item of immediate concern; it's restructuring that must be done.

I just want to pick up on one thing you said. You sort of inferred that the alternatives were peaking and that nuclear was base load. Assuming the white paper, and that the title is An Open Market for Electricity, I think you very much count on natural gas to be base load, because people are going to put in electric generating facilities within the confines of their own plants. We look very much to a base load situation.

**Mrs Fisher:** I have two quick questions, and one leads back to Mr Laughren's idea with regard to cogeneration in a different way at a nuclear site. I imagine you would agree that a 200-megawatt unit is a significant gas turbine unit, right?

**Mr Rogers:** Yes.

**Mrs Fisher:** Are you familiar with the proposal that was put before the Ontario Hydro board of directors in 1996 proposing a 200-megawatt gas-fired generator at the Bruce site which would bypass the reactor core to produce steam to continue producing electricity at the Bruce site? You're in the industry. It's a big proposal. Are you aware of this?

**Mr Rogers:** We've heard of the proposal. We're not part of that proposition.

**Mrs Fisher:** If you thought that might be an answer, would you have an interest?

**Mr Otsason:** Yes, there's no question that repowering of an existing nuclear facility is something that certainly makes a lot of sense.

**Mrs Fisher:** That proposal has been made. I don't think many are aware of that. It was made and it was declined. I never can really figure out why. Maybe it should be brought back to the table now that we get the opportunity to talk about it.

**Mr Pinnington:** My understanding was that it was the result of a consultant's study. I don't know that we ever had the opportunity to —

**Mrs Fisher:** There's a full financial plan attached to it, I promise you. It's all there, done, ready to be looked at.

The other question I would like to ask you is this: As we move forward in our energy production technologies, as you can see with Ballard in BC, there's an opportunity there for fuel-cell technology. Are you familiar with a private sector individual at the Bruce Energy Centre who has put a proposal to produce hydrogen and fuel-cell technologies by using gas-fired generation?

**Mr Rogers:** I've heard of such a project. I haven't been deeply involved and haven't read the proposal.

**Mrs Fisher:** Can I ask you to do me a favour? As an association representing the gas industry, whether you're the manufacturer of the generator or the pipeline carrier, could somebody please inquire about that and maybe bring it to the forefront?

**Mr Pinnington:** I will undertake to respond to your question personally.

**Mrs Fisher:** Thank you very much.

**The Chair:** That completes the questioning. I want to thank the witnesses for being present and attending upon the committee today. There may be some follow-up questions that will either require the committee to ask you to reappear or you might be able to handle it in writing, if necessary. Our consultants will certainly deal with that. We appreciate your evidence today and the time you've taken to attend upon the committee. We thank you very much for being here. You're excused for now.

1500

#### INDEPENDENT POWER PRODUCERS' SOCIETY OF ONTARIO

**The Chair:** We now turn our attention to the next witness, which is the Independent Power Producers' Society of Ontario, if they'd be good enough to take their place at the witness table. For purposes of the committee, we have up to two hours for questioning with the Independent Power Producers' Society of Ontario.

**Mr Tom Brett:** My name is Tom Brett. I'm the president of the Independent Power Producers' Society of Ontario and an energy lawyer with the law firm of Johnston and Buchan. I'm going to ask my colleagues to introduce themselves before we start off.

**The Chair:** For the purposes of Hansard, that would be very helpful.

**Mr Bill Taylor:** My name is Bill Taylor. I'm here today as part of the IPPSO panel, representing my employer, which is TransCanada Power.

**Mr John Brace:** My name is John Brace. I'm here today as part of the IPPSO panel, representing Northland Power.

**Mr Al Barnstable:** I'm Al Barnstable. I'm a director of IPPSO, and I'm here today representing Sithe Energies.

**Mr Bruce Ander:** I'm Bruce Ander. I'm an IPPSO director. I'm representing Toromont Industries.

**Mr Stephen Probyn:** My name is Stephen Probyn. I'm representing Probyn and Co.

**Mr Brett:** What we'd like to do is start off with a brief presentation to you and then make ourselves available for questions.

First of all, the Independent Power Producers' Society of Ontario, IPPSO, represents the independent power industry in Ontario. You have a handout that we circulated. We have corporate and individual members, a total of 437 members and some of those members are listed in the attachment to your handout. We have been an active

member of the Stakeholders' Alliance for Competition and Customer Choice, which is a group of business associations and the Municipal Electric Association advocating a restructuring of the electricity industry in Ontario.

Since 1985 our members have developed 123 power projects in Ontario with a total of 1,850 megawatts of capacity and we've invested in those projects \$2.5 billion across all regions of the province. Those are a variety of project types and sizes: natural gas cogeneration, landfill gas, biomass, energy from waste, small hydro, medium-sized hydro, and high-efficiency cogeneration. Some sample plants are shown in attachment B of our submission.

We had over 1,200 megawatts of electricity sales to Ontario Hydro in 1996, and many of our members have also been active developing projects in other provinces and internationally.

Let me just briefly touch on a few of the advantages of private power for Ontario. The first is that our plants are cost-competitive with Ontario Hydro generation. Mr Probyn and Mr Barnstable will speak to this in a little more detail in a moment. This is an important point, we feel.

Second, our plants are highly reliable. We have a high reliability of supply in the sense that we have high availability; our plants run at a very high availability rating. We have a diversity of plant size and diversity of location. Our plants are scattered across the province in the north, the east, the southwestern part of the province, Metro Toronto.

In our case, the risks of project development — construction, financing and operation — are with the private sector. The private sector investor is taking the risk and business success therefore depends on safe, reliable and efficient operation of our facilities. Not surprisingly, this imposes a tremendous discipline. You either are successful in the running of the operation or you fail financially. As a result, the projects are subject to rigorous technical and financial due diligence.

We have relatively short lead times for adding new capacity, and we will talk to you more about that in a moment.

We have superior environmental performance.

We have what we've called integration benefits with local industries and municipal facilities. As you know, cogeneration plants are built in association with industrial facilities and provide steam at reduced energy prices to those facilities. Cogeneration facilities can also be built in conjunction with municipal district heating systems, which can lead to efficiencies and synergies.

In summary, I would say it's a proven and efficient industry. It's used to competition. We're ready to invest in a supply of cleaner, reliable and cost-competitive electricity for the province.

**Mr Probyn:** I wanted to briefly discuss our views on alternative supply capacity of the industry. First of all, we've divided this into two time frames: the immediate time frame and the mid to long term.

In terms of the immediate time frame, we're obviously constrained by lack of capacity in the sense that we haven't yet built capacity to supply any deficiencies Ontario Hydro may encounter as a result of its current problems. However, we believe that the lead time for developing new capacity is relatively short. I should add, in the energy business, a year is a blink of the eye. The typical planning lead time for a new nuclear facility is 15 years, assuming one could ever get through that process. We feel our lead time for new or expanded capacity — we would begin bringing on new capacity — would be between one and two years. Within a two-year period, as you heard from ONGA, the development of new greenfield facilities can be accomplished.

In terms of the mid term, we wanted to divide this into two components: the smaller projects, which are under 250 megawatts, and the larger ones. In terms of the smaller projects, the largest potential source in Ontario, and it is a very large source, is natural gas cogen. We think there is at least 2,000 megawatts of supply from that source. Those would be various industrial facilities that would benefit from low-cost thermal energy, in addition to the energy that was being supplied to the grid.

There is also substantial new capacity in waste fuels. Biomass, wood waste plants, for example — our firm owns a controlling interest in 80 megawatts of biomass across Canada — not only provide electricity but reduce the environmental impact of particulate emissions and have a zero rating in terms of greenhouse gas emissions. In fact, one of our plants was the first plant in Canada to be awarded EcoLogo, the environmental choice award of the federal government.

Hydro-electric: We feel there are 1,200 megawatts of new capacity in Ontario in hydro-electric, again a major contributor to Canada's climate change objectives.

Solar and wind: We feel there's at least 150 megawatts of solar and wind capacity that can be brought on on a full-cycle basis that is cost-effective.

In terms of the remainder, large natural gas combined cycle plants we believe could provide 3,000 to 5,000 megawatts of new capacity. As you heard from ONGA, the limitations are very far out and the capacity supply exceeds current projected demand. That takes us to a total of 8,500 megawatts of new capacity over a 10-year period.

The new supply cost, and this reflects the diversity of options, is between 3.5 and 5.5 cents per kilowatt. Obviously some of the renewables are on the higher end of that spectrum, while large gas combined cycle plants would tend to be at the lower end. There are views, and we heard from ONGA, that feel the lower-end price could be brought even below that 3.5 cents. Ontario Hydro, I believe, has given testimony to this committee on that very matter.

I would like to now deal with the cost issues and hand over to Al Barnstable, if you could turn past the "Relevant Issues for the Select Committee" slide to the first slide on cost comparison.



**Mr Barnstable:** We have included two tables in our presentation to give some balance and to give you a better sense of how competitive our industry is. Over the past year we've had quite a bit of bad press, courtesy of Ontario Hydro reporting that the cost of their NUG contracts is way out of line with their own costs of supply. We thought we should put some evidence on the table for you that hopefully clarifies the situation.

The first table is the unadjusted cost comparison. That's simply numbers that can be derived from Ontario Hydro's annual reports. It shows their reported all-in costs for their hydro-electric generation, their fossil generation and their nuclear business, and it compares it to their costs on a unit basis with the contracts they have with our members. As you can see by looking at this table, the costs of NUGs in Ontario on an all-in basis are quite comparable with the costs historically of Ontario Hydro nuclear and its fossil generation businesses.

I would like to also point out the non-utility generation contracts represent a variety of sizes of projects that range all the way that range all the way from 40 kilowatts to 152 megawatts. These are very small projects, but we still, on an average basis, even with this very small range of projects, compete with Ontario Hydro and its gigantic-scale projects.

1510

The second table is an attempt where we feel that the numbers Ontario Hydro reports as to its all-in costs for generation need to be adjusted to be more realistic, particularly if you're comparing them with private sector generation. Table 2 makes some adjustments to Ontario Hydro's nuclear numbers for 1996 and it includes two types of adjustments: adjustments to the reported nuclear costs and some adjustments to add additional charges that they don't currently report in their annual reports on the costs of nuclear generation.

The first adjustments include higher losses. This arises from the fact that large-scale power plants like Ontario Hydro's nuclear plants are connected to the transmission system at very high voltages, either 500 kV or 230 kV. Most of our members' plants are connected at lower voltages and some at very low voltages, so that the losses between the generating source and the consumer of the power are very much less than for a large source.

The higher decommissioning charges are the result of some back-of-the-envelope calculation and we would urge you to seek additional evidence from Ontario Hydro on this particular matter. It seems that this is a very contentious area for Ontario Hydro. They, from our best guess, appear to be not booking sufficient charges for decommissioning costs. We've estimated that they should be doubling up on that charge and that would build up a fund of about \$400 million per unit in today's dollars, 25 years out in the future. They tend to pile up the money for a use date very far into the future. They assume after the nuclear units have used up their useful life, they sit essentially for 30 years before they're decommissioned. If you put the expenditures off that far in the future, of course it's a very small amount of money, but we would

respectfully submit that that is an area that needs to be looked at very closely by the province and it probably is something that should be looked at by somebody other than Ontario Hydro.

We've included higher depreciation charges for Ontario Hydro's nuclear simply to reflect the facts of life. These plants do not last 40 years without substantial reinvestments and, therefore, the depreciation charges that Hydro is currently booking are much too low. If you make those adjustments for those reported costs for nuclear, you can see that we add approximately another cent per kilowatt-hour to the reported costs.

There are some corporate charges that we feel also need to be included when we talk about the costs of nuclear energy in Ontario. If you assume it's still in the public sector as it is with Ontario Hydro and it falls under the current rules of the Power Corporation Act, there is a net income or interest cover ratio, which is required to be charged by Hydro into the rate base and it's simply an interest coverage ratio on their annual interest payments. If you attribute nuclear's share of that, you get a substantial adjustment of almost half a cent per kilowatt-hour or over half a cent per kilowatt-hour to nuclear charges.

With our members, we would have to book overhead costs, interest charges. We'd have to charge for our power an amount of money that gives us sufficient interest coverage to repay our debt. It's only fair, when you're comparing two types of generation, that these corporate charges to Hydro be included in their generation charges if you're going to compare it to private power generation.

We've also included, and this is an arguable item, as the last item, Ontario Hydro took significant write-offs last year in the amount of \$2.5 billion. It's very easy to show that at least \$2 billion of that are write-off charges related to nuclear. Those charges in effect are taken out of book to equity on Ontario Hydro's books. That equity number on Ontario Hydro's balance sheet is a result of money that's been collected from ratepayers over a great number of years and when Ontario Hydro takes a write-off, it effectively is taking money out of ratepayers' pockets that has been paid over a number of years. To our way of thinking, if you're going to look at the true costs of nuclear, you should make a charge to it to reflect the value of those write-downs. So what we've simply done here is assume that the nuclear business has to pay back that write-down over a period of 25 years at 6.5% interest.

When we make all those adjustments, we come out with a substantial cost for nuclear above Ontario Hydro's reported cost and certainly in excess of our historical costs and, as Steve has already said, as we move into the future, we expect to be able to deliver power from private power projects at less than our historical costs.

There are some significant issues here when you compare the costs. I know there are questions about comparing marginal costs to full costs, but you have to bear in mind what nuclear has cost the province so far.

**Mr Taylor:** As I mentioned earlier, my name is Bill Taylor. I work for TransCanada Power. Just by way of

further introduction to my employer, TransCanada Power is a division of TransCanada Energy Ltd, which is a wholly owned subsidiary of TransCanada Pipelines Ltd. We are a broad-based energy processing and marketing company with assets and trading operations throughout North America involving natural gas and its byproducts, crude oil and its byproducts, as well as electricity. Through a related company, TransCanada Power Limited Partnership, we own and operate three natural gas-fired cogeneration plants located in Ontario with a total installed capacity of approximately 120 megawatts.

I'm also here today speaking to you as a large power consumer in Ontario. TransCanada Pipelines has peak electric consumption totalling approximately 85 megawatts on an ongoing basis. As such, the TransCanada group of companies has a direct and substantial interest in these proceedings as they relate to both the rates of Ontario Hydro and also surrounding the potential restructuring of the industry which we hope is imminent.

I'd like now to turn to briefly touch on a written submission that TransCanada made to this committee that was provided to you in writing earlier this week.

TransCanada respectfully submits to this committee that the recent announcements of Ontario Hydro regarding the operation of their nuclear power plants and their plan referred to as the OH recovery plan are inextricably linked to the issues currently facing the government of Ontario surrounding the future structure of the electricity marketplace, which has come to be known as the white paper.

We submit that the OH recovery plan, involving a combination of new spending and indirect costs totalling an estimated \$5 billion to \$8 billion of Ontario taxpayer and ratepayer money, should be determined by this committee to be flawed on the basis of its timing alone.

Further, we submit that since Ontario Hydro and others have recently testified before this committee that there is currently no concern — I emphasize “no concern” — for public safety related to its nuclear operations, the OH recovery plan, as it has been laid out, must be considered by this committee to be strictly a commercial matter. As a commercial matter, the OH recovery plan is directly linked to matters to be addressed and debated in the forthcoming white paper. Any decision of this committee regarding the OH recovery plan must be considered along with all other matters surrounding the white paper, lest the committee presuppose or inadvertently cause a certain commercial result that would have an adverse effect or a potential adverse effect on the ratepayers or other stakeholders in Ontario.

In conclusion, TransCanada submits that the committee should recommend that the OH recovery plan be placed in abeyance until the white paper has been released, debated and acted upon by the government of Ontario. Thank you for the opportunity to be heard.

**Mr Probyn:** We'll conclude with just a brief discussion of some of the issues that we believe the committee should review, and that's in your binders, which I should mention include a number of photographs and other information about independent power plants in Ontario,

about halfway. Unfortunately, we forgot to notify the clerk about the need for an overhead, so I apologize for motoring you back and forth through this material.

In terms of our first point, we believe that a competitive framework is essential for this committee's continued work. In that respect, we believe it's important and we would urge the government to move on this expeditiously to issue the forthcoming white paper. We think that we, in Ontario, must move into the new world of a competitive marketplace in the electric power sector and, in order to properly evaluate options, I think the white paper is absolutely essential to this committee.

The second thing is that, as Bill pointed out, we're disturbed by the pre-emption of competitive options by the decision made by Ontario Hydro at its board meeting in August when it accepted the nuclear recovery plan. We feel that this was not an appropriate way to proceed. We believe that competitive options must be explored to the benefit of the Ontario consumer.

#### 1520

The third thing I would say is that we believe the competitive market is the only realistic way to see increased electrical supply from the private sector. We don't see a return to the contracts that were issued previously and we have adapted our industry to meet the demands of the competitive market.

Finally, we think that benchmarking nuclear can only be really achieved in the context of a competitive framework. The complexity of the numbers, the issue that is before decision-makers, really demands that we have a marketplace so that consumers can choose their options based on reliability, competitive pricing and other considerations such as environmental benefit.

That concludes our presentation. We are obviously delighted to take your questions.

**The Chair:** Thank you very much for your presentation. It certainly has gone to the heart of one of the issues this committee has been wrestling with in the last several days, and I appreciate your presentation. We'll begin the questioning with Mr Laughren.

**Mr Laughren:** Welcome to the committee. You certainly struck a nerve among some of us when you talked about a couple of things. One is the white paper, because some of us feel that as a committee we're operating in a strange vacuum here and we don't know where we're headed, so it's very difficult. We are trying to put as much heat as we are able to on the minister to get the white paper to us and to make it public. Your comments are most appropriate.

The other thing has to do with the recovery plan, which is only a nuclear option. Some of us have been pressing for that. What I wanted to ask you is, when you look at that recovery plan, which I assume you have, having a vested interest in doing so, and appropriately so, and you try to put yourself in place of the nuclear recovery, what do you see there? How would the members of your organization fill in the blanks if there was no nuclear recovery plan and the A units at Pickering and Bruce were both not to come back on stream? How could you see that



happening? How long would it take? How long would the contracts have to be that you would seek in order to feed into the grid? Is that too much in one question?

**Mr Probyn:** No, sir. I think essentially, as I've said earlier, we believe the supply is there and the way it will be brought on will be determined by market forces. That's why I've said it is so important to have the white paper, to have the structure of competition in front of us because at that point, we will start seeing a diversity of options.

One of the interesting things about the private sector is that there are a lot of ways of skinning particular cats. You'll find merchant plants, plants that are partially merchant plants, partially contracted to industrial customers. You'll find the municipal utilities as players in the market. You'll find energy aggregators. You'll find a whole range of individuals and businesses step up to service the consumer.

I was involved 10 years ago in the deregulation of natural gas. I was working in the federal government at the time in the Department of Energy, Mines and Resources as it was then known. At that time industrial consumers of natural gas didn't have a strategy for managing that cost. They simply sat there, they paid the bill. When the gas market deregulated you saw the development of a diversity of products. You also saw the price of natural gas, which is \$4.40 per million BTUs, fall to today's range of around \$1.20, \$1.50, depending on the term of the contract.

What I'm saying is, I'm not going to plan the energy future. I think what we need to do is to bring forward a framework to allow people to plan, to purchase and to manage their own energy futures. What we're saying today is, based on the capacity that we see, there's plenty of room, there's plenty of resource and we think we can move into this new future with a minimum of disruption.

**Mr Laughren:** The way in which Hydro's request for proposals has come out — I assume that some of your colleagues would have seen those and maybe all of you, I don't know — is there enough scope in them for members of your organization to jump on those and submit proposals?

**Mr Probyn:** If it's all right, I'd like John Brace from Northland Power to address that question.

**Mr Brace:** I'd like to talk about this from the point of view of a generator of power. What we need is clarity in the situation. We need to know what the rules are, we need to know what the rules will be over a reasonably long period of time so that we can work with other parties, be they Ontario Hydro, be they municipalities or industrial concerns that would buy power from us, so we can make the long-term decisions to build power plants. Nobody in the private sector is going to build a power plant without some certainty that you're going to have a product you can sell over the long period of time.

Coming to the RFP, the RFP is not structured that way. The RFP is structured only along the lines of, what can you provide for 1998 and 1999 and maybe the year 2000? There's no commitment whatsoever there would be any purchases beyond that. I don't think there are very many

people who would make investment decisions that require a fairly long period of time to pay back, who would invest in new facilities to answer that RFP.

I think each one of us has potentially options in our power plants to take advantage of some existing unused capacity that's already built, or possibly some low capital cost and, as a consequence, low quantity of power supply expansions or changes to the plants, but I don't think that RFP is going to result in anything significant. That's the way it's structured. It's structured to deal only with the short term and it presupposes that Ontario Hydro will be the supplier after that RFP period is over. To me, it's not an RFP structure to allow the private sector to contribute a meaningful solution to the situation in Ontario at this point in time.

**Mr Laughren:** Thank you. Could I ask a question on the cost figure? You talk about adjusted cost comparisons for Hydro nuclear and you compare Ontario Hydro with the Ontario NUGs. The Ontario Hydro nuclear costs include capital costs and also include the costs of servicing new debt presumably. If you were to be plugged into the system in a major way, would you not also have to assume part of that cumulative stranded, if you will, debt and is that built into your costs you show here for NUGs?

**Mr Barnstable:** Our costs here are simply historical costs. These are the costs of our products to date, compared to the 1996 costs adjusted up for Ontario's Hydro's nuclear. It doesn't get into future.

**Mr Laughren:** I know, but the reason I asked —

**Mr Barnstable:** We're part of the Stakeholder Alliance for Competition and Customer Choice, or SAC, which is a very broad-based alliance of large consumers, independent business, producers such as ourselves. What we've said is that costs that are stranded, that are really stranded debt, would be a system cost, would be addressed by a stranded asset charge, as recommended by the Macdonald committee, to ensure that debt is covered and that debt is not a burden on the taxpayer.

1530

**Mr Laughren:** Maybe I'm not putting it very well, but those costs are already built into Ontario Hydro Nuclear's costs of delivering power. Those are not built into Ontario NUGs' costs for comparative purposes in your chart. Is that realistic, is that fair?

**Mr Probyn:** We have debt service assumed in our costs. If you're saying, is there —

**Mr Laughren:** But you're going to have some of theirs too.

**Mr Probyn:** What I'm saying, though, and this is why I think the SAC proposal is so important, is that all the participants in the market will in fact underwrite the debt of the system. I mean, you're looking at a system debt, so the NUGs obviously will do that because they're in a competitive framework and essentially, because they're part of the system, they are part of underwriting that stranded debt.

**Mr Laughren:** I think you're in denial here.

**Mr Taylor:** I'd like to try to answer your question. If I understand you correctly, you're asking whether the

independent power producers as a group are considering the fact that we may have to pay some portion of this stranded debt. I suggest to you conceptually I have a difficult time understanding why that burden would be placed upon new participants in the marketplace as a producer, as opposed to the consumers for whom that debt was, perhaps inappropriately, taken on by Ontario Hydro for consumers of Ontario. To add that additional burden to potential producers and participants in an open market, in my opinion, would not be appropriate.

Your question I think is really going to the appropriate way to address the issue of the stranded costs, which of course is a very complex question and has broad implications as to what the market may look like. Further, specific to your question, the six cents per kilowatt-hour existing costs of contracts does not include any of that stranded component.

**Mr Barnstable:** If I could add something, there's a balance here because the amount that gets stranded is going to be a function of what the competitive price is by private producers. Ontario Hydro gets adjusted down to a marketplace. We're the marketplace in terms of its competition. The lower we can generate power, for the more stranded charges there would have to be if it comes into play in the generation sector. But a valid alternative is you don't bring it to the generation sector. You leave it with the power consumer, but you don't encumber the competitive marketplace at the generation level.

**Mr Laughren:** As long as everybody's feeding into the same grid or pool, call it what you will, then I could see that. What would be unfair is that if you were selling to a large industrial user like Falconbridge, for example, and it was not part of that, nobody was paying part of that debt.

**The Chair:** I'm going to move on to Ms Johns.

**Mrs Johns:** Thank you very much for being here. I would like to talk about, first of all, your slides. Steve, you started to talk about the ability of the private power industries to increase Ontario's supply. You listed five sources of power, and one of the charges we have been given is to examine alternative power sources in the province. Can you tell me if these five sources — natural gas cogeneration, waste fuels, hydro-electric power, solar and wind — are the only options available to the people seeking electricity in the province?

**Mr Probyn:** There are other technologies. There was discussion of fuel cells, for example, and many people feel that in the future fuel cells will play a very important role in distributed generation. So these are the major technologies that are generally considered to be available currently.

**Mrs Johns:** With the best of your expertise — and I refuse to let you get off this question because I think there's expertise at this table — the cost per kilowatt, megawatt, whatever you want to give me, all of these, what does it cost me for natural gas cogeneration? What does it cost the ratepayer in Ontario for natural gas cogeneration?

**Mr Probyn:** What we have said is that new cogeneration — and, again, a lot of it depends on the specific site and very differing industrial requirements — can be in the range of 3.5 cents.

**Mrs Johns:** How about waste fuels?

**Mr Probyn:** It depends on the waste fuel. Biomass, for example, is around 5.5 cents, perhaps as low as five, but other wastes, landfill gas, maybe a little less. Again, it depends on the waste. Energy from waste can actually have a low cost depending on the amount charged for burning the garbage.

**Mrs Johns:** Hydro-electric.

**Mr Probyn:** Hydro, again, varies significantly. I would say a good representative hydro number — and we have here Mr Clair Murdoch with us, so he'll correct me if I'm wrong — might be, depending on whether it's small hydro, large hydro — small hydro, let's say, six cents.

**Mrs Johns:** Solar.

**Mr Probyn:** Solar, probably in the 11 cents to 15 cents range. Solar, by the way, is primarily from remote applications.

**Mrs Johns:** Wind.

**Mr Probyn:** Currently there is wind being produced in Canada for 5.75 cents. Large-scale wind farms give economy. The quality of the wind resource is very important. We finance 90% of Canada's wind power, for example, but that's mainly located in the Rockies where you have a very high quality wind resource. Up in Kincardine there's a good wind resource; Manitoulin island, another one; and Wolfe Island. They are three excellent wind resources, but they're not of the same quality as the Rockies. So that's going to make it a bit more expensive than, say, that five cents to six cents wind cost that would prevail in Alberta.

**Mrs Johns:** So would you say seven cents then? Tell me your best guess.

**Mr Probyn:** I think it depends on the resource. I would say seven to 10.

**Mrs Johns:** Fuel cells. I know we're not there yet. Do we have a cost for fuel cells yet?

**Mr Probyn:** Right now — and, Bill, you may be more up on fuel cells than I am.

**Mr Taylor:** I can't help you there. Sorry.

**Mr Probyn:** They are not developed. But there is an expectation over the next decade that fuel cells will come down very significantly to the point where they play an important role in what's known as distributed generation.

**Mrs Johns:** On this chart you've conveniently left out what I think my most important question is. Tell me how many megawatts I have that I could get hold of immediately?

**Mr Probyn:** You mean tomorrow?

**Mrs Johns:** Tomorrow.

**Mr Probyn:** We discussed that and it's a difficult question.

**Mrs Johns:** I know because I think I said I'm going to ask this question with everybody who has been around me for the last six weeks.



**Mr Probyn:** In terms of tomorrow, there is unused capacity in a number of the plants.

**Mrs Johns:** Northland.

**Mr Probyn:** Northland, I believe TransAlta, possibly TCPL, and we think —

**Mrs Johns:** Dow.

**Mr Probyn:** If you included Dow, you'd be in a couple of hundred, 300 megawatts, if you said, "This is capacity that's newly available to the system."

If I could make one comment, I don't think our problem is tomorrow. There are existing resources within the Hydro system and also there are large-scale imports that are available to this province in Quebec and also in the northeastern United States. So it's not tomorrow but the day after tomorrow and the year after tomorrow that I think is the key.

1540

**Mr Taylor:** If I could add some comment as well, and I'm not suggesting that your question was leading in this direction, but I just wanted to add that you should not be surprised by the fact that there are not large amounts of capacity available at our existing locations due to the fact that the current commercial environment that we exist in, that being Ontario Hydro as the unregulated monopoly, does not entice us or anyone else to invest in this province.

**Mrs Johns:** Exactly. I understand that. Thank you for clarifying that, though.

I am now on to table 2. I want to say, first of all, that I do my own income tax return every year, and whoever did this, I'm going to get them to do it from now on. I figure I'll save thousands of dollars.

The one thing I wanted to comment on with this, which I think you have brought up, that we've been really concerned about on this committee — let me say that I do take the point, first off, that the costs are much higher than Hydro is telling us about. I take that point. I am talking half cents here and there. It doesn't really matter one way or the other. You make a very explicit point on this form that you believe the life of the nuclear plants is not 40 years, or you believe that the assets shouldn't be amortized and depreciated over 40 years. We've heard at least one chair complain that aging was a complete surprise to him, basically, or that that was part of the problem.

**Mr Brett:** It surprised my wife too.

**Mrs Johns:** Trust me, it's a surprise to me too. How did you come up with 25 years' worth is 40?

**Mr Barnstable:** First, I'm an engineer. Second, I worked at Ontario Hydro for 26 years. I went to Ontario Hydro to work in the nuclear field, and I worked there for AECL when I was a student. Look at Bruce A. How old is it?

**Mrs Johns:** I don't know. Twenty years?

**Mrs Fisher:** No, 1982.

**Mr Barnstable:** Well, it's toast.

**Mrs Fisher:** It was commissioned in 1982.

**Mrs Johns:** That's 25 years.

**Mr Barnstable:** I don't think it's smart to depreciate equipment longer than it's going to last, and I don't know too many companies that do.

**Mrs Johns:** But we have a hard time figuring that out. I don't want to take the side of Ontario Hydro or anybody here.

**Mr Barnstable:** It's a real issue.

**Mrs Johns:** It's hard to figure out, I think.

**Mr Barnstable:** It's an issue because if you accept 40 years as appropriate depreciation, you've bought into the trust of having to shell out more bucks in that 30-year period to keep your investment intact. It's just not good investment sense, period. What we're saying is —

**Mrs Johns:** I think what we would believe around this table is that they didn't maintain, so they didn't do the normal operating things that should have happened in a year, and that's why they've shrunk their life. Would you disagree with that?

**Mr Barnstable:** Well, nuclear is a very technical business. When I joined Ontario Hydro, we were commissioning Douglas Point, we were building Pickering and we were designing Bruce A. We still didn't know how the hell Douglas Point was going to run and it didn't run very long.

There was a lot learned. It's a very steep learning curve. Hydro's done a wonderful job. I'm the first to applaud them. They have done an outstanding job. I think they're getting some shabby treatment right now. The fact is that it's a very highly technical endeavour.

A person who is a good friend of mine, who has worked in the nuclear business all his career with Ontario Hydro — I put the question to him this way. I said, "Do you think there's a future for nuclear at Ontario Hydro?" His response, I think, shows as much insight as anybody's. This is somebody who has worked there for 30 years, all in the nuclear business. He said: "It's such a complicated technology, such a sophisticated technology, in need of such tender care and safety considerations, it requires an enormous bureaucracy to run it and, by definition, an enormous bureaucracy is not going to run it efficiently and cost-effectively." These are all philosophical but they all come back to, "How long do you want to bet on this investment?"

**Mrs Johns:** We're trying not to bet in this committee right now.

I'm going to use one of my Elinor Caplan techniques now, because I think I'm running out of time, so I'm going to ask two questions at once to get it all in before it goes.

I understand that in 1989 Hydro did an RFP, looking at alternative sources of power. Can any of you people tell me what the capacity was that they came up with in 1989? Then I would like someone to tell me how they would like the central market operator function to work to ensure that you people get your power on the grid and that the stranded debt and Ontario Hydro get their power on the grid in an equitable amount that allows the ratepayers of Ontario to get the best price for power.

**Mr Barnstable:** I'll try the first one.

**Mr Taylor:** I'll take the second one.

**Mr Barnstable:** I feel I can answer the first one because at the time that our fee was put out, I was running the contracting business for non-utility generation and I

was essentially charged with the responsibility for that RFP. I can get a better answer for you, but my guess is, we had about 2,000 megawatts that we were prepared to deal with and had started contracting. There were some cutbacks as we got down the road a bit and found out the forecasts were wrong, but my recollection is that we had something in the order of 8,000 megawatts proposed to us. I can check that.

**Mr Brace:** I recall the number being 6,500 megawatts.

**Mrs Johns:** Was that over a long period of time?

**Mr Barnstable:** No, they were all set to do it whenever we could contract.

**The Chair:** We received your question, Ms Johns.

**Mrs Johns:** I agree. I just couldn't understand the answer. I apologize. Sean will ask it for me out there.

**The Chair:** You're pulling a Conway here now. I have to go on.

**Mr Conway:** And that's bad.

**The Chair:** It's getting infectious.

**Mr Conway:** Helen, you have just been insulted.

**The Chair:** Not at all. Let me move over now to Mr Conway.

**Mr Conway:** I want to pick up on Ms Johns's very good questions. Mr Probyn, some wag in the Financial Post recently wrote about this as a lame duck committee. I think his name was Probyn. I just wondered if you were related to that fellow. If I remember correctly, could you perhaps elaborate on the lame duck quality of this committee?

**Mr Probyn:** It's obviously hobbling around at great speed. I will say this, Mr Conway. You're right. I am related to that Stephen Probyn; in fact I am that Stephen Probyn and I will explain the context of my remarks in the Post.

What I was concerned about was the sense that under the Power Corporation Act a decision had been made by Ontario Hydro which essentially pre-empted the policy functions of this committee. With all due respect to the members of the committee, I said that I wasn't really prepared to accept your technical expertise in advising me that the nuclear reactors were safe. What I wanted was your policy expertise in telling me how the nuclear system was going to fit into the context of Ontario's energy future.

I apologize if my language was colourful. I don't think I used the words "lame duck," because they are overused.

**Mr Conway:** You need not apologize. I think it was quite a good analysis. I used to get glossy brochures in the spring over at my apartment at Bay and Bloor. It was another fellow named Probyn on those brochures, but I don't know whether he was related to you.

**Mr Probyn:** I hope I got your vote.

**Mr Conway:** Probyn is a very popular name in my neighbourhood.

Seriously, on the white paper, I think I heard you very clearly say that it's absolutely essential that that document be tabled as early as possible. Have you any information as to when you expect it to be released?

**Mr Probyn:** I think you'll have to ask your other witnesses.

**Mr Conway:** If you and Diane Francis don't know, how would anybody in this room know?

**Mr Probyn:** I'm not equipped to answer that, Mr Conway.

**Mrs Johns:** Oh, give him an answer.

**Mr Probyn:** We told him two weeks.

**Mr Conway:** I also want to come back to two questions, one that Ms Johns raised but also the one Mr Laughren raised. Let me start with the Laughren point initially.

There is no question that in this new framework — and clearly we are going to go to a rather different electricity market than we've experienced in the post-Second World War period. There was a day when the independent power producers were big news in this province. The dusty annals of the legislative library have some of the most lurid tales of private power. I won't bore anybody with them but, boy, they make for very interesting reading. But in the post-Second World War period we've had one kind of market and it's going to change.

One of the real issues that taxpayers are going to want some comfort around is this business of stranded debt. I was listening carefully to what you were saying to Mr Laughren and I want to just understand that. It's your position that any charge to retire stranded debt should be a charge on the system, probably attached to transmission, and in no way encumbering new generation.

1550

**Mr Probyn:** I think that's the logical place to put it. I think we feel we need the discipline in the marketplace of the system paying its own way. As you may be aware, SAC has indicated that it's its strong view that the system and not the taxpayer should deal with the stranded debt that has been incurred by the system.

**Mr Conway:** But some people would argue that that's a very disingenuous distinction in this sense that, who is the system? Yes, we want to protect the taxpayer, but there are those who are very concerned that this is going to be organized. We don't expect the forces of big-league capital to volunteer for any more of this cost than they might have imposed on them. I've been around politics long enough to know that one of the most powerful and endless games at work is the transferring of cost. You're going to have a very positive future in this province, make no mistake about that. I'm deadly serious. It's going to be much better next generation than it has been the last 15 or 20 years. But the public has been burnt in recent times.

I was using the example just the other day that the Auditor General of Canada pointed out, that we've privatized NavCan and we got about \$1 billion less than it was worth. That's according to the Auditor General of Canada. That's exactly what the taxpayer expects. They can just imagine in this new world order that when you get to stranded debt — I would suspect seven out of 10 taxpayers would fully expect that the Provincial Auditor will show up when none of us is around in five or 10 or 15 years time to tell the tale about how the poor old taxpayer



got hosed, that the stranded debt was disproportionately loaded on the taxpayer.

**Mr Probyn:** Let's look at the so-called stranded debt. Essentially it's an obligation on the people of Ontario to service the debt of Ontario Hydro if Ontario Hydro itself is not able to provide that debt service. What we are really talking about is two ways to deal with it. One is through a monopoly corporation which uses its monopoly to keep prices high and to try to service the debt it has incurred in these decisions.

**Mr Conway:** But Mr Probyn, there will be a lot of people who won't agree with that assessment. There are those people who are going to say that a stranded debt might very well be that which was organized with a particular prejudice. For example, there are those who look at the Hydro recovery plan and say, "This is a very clever plan; this is all about stranded debt," not ever admitted as such. Now they may be wrong, but I'll tell you, we've had some people in this room telling us: "Well, isn't this a pretty picture? The utilities are telling you that it's all about recovering their nuclear fleet when it has much less to do with that and much more to do with positioning the utility for the new world order."

When I come back to the point, I think stranded debt may be viewed by many people as something other than your definition. I don't disagree they're relevant issues for the committee. I think you've highlighted those quite appropriately. The devil is going to be in the details and the design, because clearly all of the political parties in this province for 10 years have said Hydro's monopoly on generation will end. We've had a very strange kind of decade, with a sharp drop in electricity demand and a variety of other things, but that appears now to be changing. We had this incredible spectacle this summer of the chairman of the public utility standing up and saying: "All the things you've ever said about us are true, and things are really bad. We're going to take seven reactors out of operation for a period of some years, and we may or may not bring them back, depending on the economic analysis," and other things, but the economic analysis is clearly going to be really important.

That then gets you right back to assumptions. I thought Mr Brace made a very good point. He has made the point to me in other circumstances, so I was not unfamiliar with it. Nobody is going to commit private power, particularly greenfield private power, without the very things he mentioned: in what context, for what period of time? That gets you into a whole series of assumptions.

I still come back to Mr Laughren's point, then: How do we let private power in, as we clearly have and will have more of, and yet ensure that we don't, in doing that, really leave the provincial taxpayer, who is guaranteeing \$29 billion worth of debt already, even more exposed?

**Mr Probyn:** I'd like to just make one brief comment.

**The Chair:** Very, very quickly, please, Mr Probyn. I have to go to Mr Laughren.

**Mr Probyn:** The way to deal with it is to make the market transparent. The problem that everybody has had, ranging from yourselves in the Legislature, including the

decision-makers in the bureaucracy, is that Hydro is not transparent. You need a transparent market; you don't need a black box. That's what we're advocating.

**Mr Taylor:** May I comment?

**The Chair:** Yes, please, very briefly.

**Mr Taylor:** Sure. I think Mr Conway has hit on, in my opinion, the issue here, which is the stranded debt issue that needs to be wrestled to the ground, which, I might add, takes us right back to the issues before the government in the form of the white paper.

That being said, I think this is not a new issue in other industries and it's not a new issue in the electric industry in terms of the fact that this government has a number of different sources that can be viewed in other markets in other jurisdictions in Canada — Alberta for one — the United Kingdom, New Zealand, Australia and the United States, which can tell you how you deal with this monster called stranded debt and how you make the market work effectively so that private power will have the incentive to invest in the business and to move the market forward in a reasonable way.

I would suggest to you that there are other sources of data that we as a company at TransCanada, and if I can speak for the association, would be prepared to make available to you.

**Mr Laughren:** For many years I was always opposed to breaking up Hydro. I always saw it as the old line: It's my party and I'll cry if I want to. That's how I regarded Hydro, as being part of my family in the province. Now I come at it from a social democratic viewpoint as well. The only time I felt it would be appropriate to start changing the field out there was when Hydro used up its surplus. When they had reached a point where they used up their surplus, then I was prepared to say, "Come on in, folks, and help us," because I'm not a huge fan of nuclear power. "Come on in, folks, and let's get on with supplying power into the grid." So I welcome the thought of particularly the gas industry coming into it. I think that's very good.

But — not that I am a decision-maker any more, if I ever was — I would oppose the bringing in of folks like you if you didn't assume your share of that stranded debt. The reason I say that is that that debt was incurred on behalf of all of us. We may have some questions as to how it was done. I would not have built Darlington in the first place, but nevertheless we did, it's ours, it's us, and we've got it, and it's yours too. You may not like that, but it is.

I think it's appropriate that if you want to get in on the action now, after all the agony of the years gone by, if you want to get in now when it's a lot easier sailing than it was then over those years as a struggle went on to build the nuclear plants and how the costs went way out of whack from \$4.5 billion to \$14 billion for Darlington alone, if you want in now, then damn it, in my view, you're going to have to assume part of that responsibility, just as I do as a taxpayer. Indirectly, that's where it all goes anyway. We know that. I would not support you folks coming into the grid to supply power unless you're

prepared to see that stranded debt as part of your problem too. That's why I feel so strongly about it.

1600

**Mr Probyn:** We've actually accepted that.

**Mr Laughren:** It doesn't sound like it to me.

**Mr Probyn:** What we've said is that the electrical supply system, which includes everybody in it, suppliers and consumers, must deal with that. If we were saying the taxpayer should deal with it, then we wouldn't be accepting it, because what this does, what the acceptance by the electric supply industry of the debt does, is it narrows our market and it makes essentially the business of supply more costly.

Essentially, that's all one can do. You either put the burden on the electrical supply industry, which is ultimately reflected in costs — you try to wring as much efficiency out of the electrical supply industry as you can so as to reduce those costs, but there's no free lunch, there are no easy answers — or you put it on the backs of the people of Ontario as taxpayers. But the fact is they're going to get it, as taxpayers or consumers, but we're saying the electrical supply industry is where it belongs unless somebody can come up with some other considerations.

**Mr Laughren:** But that's too cute by half. It seems to me — you don't have to agree with me. That's all right.

**Mr Probyn:** Okay.

**Mr Laughren:** It seems to me that when you have to price your product, it's not at a level playing field if you don't have to absorb some of that stranded debt cost too. Otherwise, the charts that you've got in here are what will be fed to the public out there and they'll believe you, and I don't think that's fair.

**Mr Probyn:** Let's just look at how this is going to work in practice. You're going to have a pool marketplace where there are prices. You've already got this in Alberta. The price to the pool will be driven by competitive forces and there will be a variety of participants. There will be public sector participants, such as some of the hydro generators, and there will be private sector participants. All of those generators will be price-takers. They're not monopoly so they can't enforce prices. If the overall price of power doesn't support the coverage of the debt, it becomes stranded debt, at which point the regulators, say the Ontario Energy Board, will say, "We're going to put a charge on the system which will be reflected in prices." We will also likely see, quite frankly, attempts to ensure that people don't escape that obligation. We're not here to say that we should escape it.

**Mr Laughren:** I know you're not. At least I don't think you are. That's fine, and I said that the last time we went around. If there's a pool there that everybody's feeding into and then distributing it to all the consumers and the charge is put there on the pool before it's distributed to all the consumers, I've got no problem with that. Then it's not put on you directly, it's put on the pool, which everybody feeds into.

**Mr Probyn:** Precisely.

**Mr Laughren:** I've got no problem with that. But what I said was I would be opposed to a system in which if you're supplying directly to Falconbridge, to use that example again, or General Motors, I think it would be wrong for General Motors to be buying power from you without being subjected to that same charge. That's where we differ.

**Mr Probyn:** One of the reasons that SAC has recommended a transition agency is to deal with these kinds of issues to ensure that the stranded asset charge is levied fairly and that there isn't a wholesale movement away from it.

What we've said is, yes, it's very complex. The principles are clear, and I think we've tried to enunciate them over the past year and a half. But the question is, "The devil is the details," to quote Mr Conway, and in that regard, we have advocated a transition agency which would be headed up by somebody who is independent of government and has a strong mandate and technically expert staff to develop the legislation, the regulatory framework, all the things that need to happen to move us into the transition towards this new era.

**Mr Barnstable:** Can I get one more word in?

**Mr Laughren:** As far as I'm concerned you can.

**Mr Barnstable:** From the committee's perspective, you have to look at two types of stranded debt: stranded debt that arises from debt that already exists and stranded debt that could arise from additional debt that's taken on by Ontario Hydro. I'd respectfully submit that the first type of debt is already on the table. It's more subject to the white paper and whatever transition things, and we're quite prepared as an industry to involve ourselves to see that that's done in an equitable manner. From your perspective as a committee dealing with Ontario Hydro and its nuclear situation, it's the second type of stranded debt that you should be really concerned with.

**Mr Laughren:** I don't disagree with you there. I would be very concerned about that too, because if Hydro now launches into an \$8-billion refurbishing of the nuclear plant — and that adds on to their debt, there's no question about that — is that fair?

**Mr Barnstable:** One point we're trying to get across very strongly is we feel we have a very efficient industry that can deliver the goods, it can deliver a reliable product, but if you load the whole marketplace up with too much stranded debt, even with our help you're not going to see lower electricity prices in this province. Ontario Hydro's debt could put off for a long time the day when Ontario consumers see lower electricity prices as a result of competition. Stranded debt is a very key item, or more spending by Hydro, I guess.

**Mr Galt:** I'll just start off with a couple of clarifications, if I may. One has to do with the RFP put out by Ontario Hydro. They're asking for 5,000 GWhs. I've been asking around. Does that stand for megawatts or does that have some other connotation?

**Mr Probyn:** Gigawatt-hours.



**Mr Galt:** That's a gigawatt? How does a gigawatt compare to a megawatt? Is that a thousandth of a megawatt?

**Mr Brace:** A gigawatt is 1,000 megawatts.

**Mr Galt:** So they're suggesting some of these plants could get down to two gigawatts in any month? I think I can turn a crank and get that much out then.

**Mr Brace:** That's about two and half megawatts, if I recall, if you calculate it.

**Mr Galt:** It says two gigawatts.

**Mr Brace:** Right, but if you divide that by the hours in a month, I think you get somewhere around two and a half megawatts.

**Mr Galt:** That works out to two and half megawatts?

**Mr Brace:** Right.

**Mr Galt:** I thought you said a gigawatt was a thousandth of a megawatt.

**Mr Brace:** No. It's got the word "hour" in there. A gigawatt-hour means you produce a certain number of kilowatts every hour in the month and that adds up to a giga worth of them, which is a billion.

**Mr Galt:** Just to add to the confusion of understanding how you measure something you can't store.

**Mr Brace:** Right.

**Mr Galt:** The other problem I have, this booklet that you shared with us, very kindly, I don't think Mrs Johns was trying to set a trap for you, but I have some problems with the figures Mr Probyn gave. Having to do with hydraulic in northern Ontario, it's indicating it cost 13.338 cents, and you suggested 5.6, if I remember correctly. Your wind farm, you were pretty good there; you were seven to 10 and this is 9.9. On waste wood, 9.5.

**Mr Brett:** Excuse me, what page are you on there, Mr Galt?

**Mr Galt:** It doesn't have a number, but it's second from the last. There's a chart, "The Economic Cost of New Generation," right up at the top. When it comes to waste wood, it's 9.5 and Mr Probyn suggested 5.5; when it comes to cogeneration, it ranges from 9.2, and the other one's 6.6 and I believe he suggested 3.5. Can you clarify these differences?

**Mr Probyn:** Sure. What I would like to say is that with a number of these, as is the case with any numbers, there are numbers that are on different bases. Some of them are levelized costs, some of them are initial costs with certain escalation assumed.

I can tell you, in terms of things like wood costs, as I say, we are the owners of 80 megawatts of biomass generation capacity across Canada and I know what I get for my power. That's the number that I'm relating to as a kind of businessman's number: Here's the product I make and this is how much I sell it for.

In terms of some of these other numbers, as you can see, there are environmental costs that are associated with those numbers, and so those are in many cases what we refer to as full-cycle costing.

When I was responding to Ms Johns I was really responding from my own experience as somebody who has

financed roughly \$1 billion worth of plant in this sector and also owns a great deal of it.

1610

**Mr Galt:** Having figures that do not have everything all-inclusive and broken down really is not very helpful to us — I may not have said that right — unless we have all those figures broken down. Just having it fragmented and here and there adds to our confusion because our level is policy, as you said earlier. Talking about it being a lame duck or a duck with arthritis, I see our committee more like trying to close the barn door after the horse got out. That might be a better description of what we're trying to do. But we do need the figures so we can think in terms of policy, not how you repair a nuclear generator. That is where we're struggling from.

You mentioned having all costs in there. I'd like to talk a little bit about this level playing field. I have heard real concerns from your group with having grants in lieu of taxes that Ontario Hydro pays, which are about a thirtieth of what you people would have to pay in taxes on a hydraulic generating station. On the other hand, when we come to nuclear, as we look at the decommissioning exercise with these plants, they're having to pay all the environmental costs of decommissioning and getting the spent fuel safely away. In your prices do you include the emission costs to society that go out the stack?

**Mr Probyn:** Sure.

**Mr Galt:** Where does that appear in here, the cost of NO<sub>x</sub> and VOCs and SO<sub>2</sub> etc?

**Mr Probyn:** Those are related to the environmental costs you'll see in that table. We deal with the decommissioning costs. I've got biomass plants and quite frankly the decommissioning costs are salvage. We are monitored in terms of strict environmental regulations. If we spill a litre of oil on the ground, that's reported to the Ministry of Environment, so we are very strictly monitored from an environmental perspective. We account for our costs. We have to account for our costs. They're a liability.

**Mr Galt:** I'm taking these costs one step further than the regulations require. I'm talking about the NO<sub>x</sub> that's allowed out in the atmosphere, the CO<sub>2</sub> that's allowed out that causes a greenhouse effect. I'm talking about the total cost. There is a cost, even beyond regulation.

**Mr Probyn:** I couldn't agree more.

**Mr Galt:** Are those included?

**Mr Probyn:** I'm involved in the first demand-driven green power program in Canada, which is actually taking place in the deregulated Alberta environment. Our company is selling to consumers, some of whom we believe will actually be in the oil and gas industry in that province, who are trying to deal with those costs. I believe the best way to deal with those costs is through market-driven incentives, through things such as tradeable emission caps that enable the ultimate decider, the individual or individual firm, to make decisions about how they allocate resources and how they use all our resources, including the so-called externality resources of our air and our water supply.

**Mr Galt:** We have a fair amount of water that's still running downhill. We need a certain amount to be aesthetic, going over falls etc. Water running downhill has a tremendous amount of power. Have we captured all that's out there, without damming up and having great flooded areas? How much more power could we produce if we were to capture all the water, without messing it up aesthetically?

**Mr Barnstable:** I can answer that. I think in our numbers here we show —

**Mr Galt:** I'm looking for something very ballpark.

**Mr Barnstable:** Ontario Hydro used to have a hydro-electric development program. In there it included some new development at Niagara, some new developments on northern rivers and some upgrades to existing plants. I think it totalled just under 2,000 megawatts additional capacity. On top of that there's probably another 300 or 400 megawatts of small hydro projects that could be developed on smaller sites than Ontario Hydro would bother with.

**Mr Galt:** We heard earlier, and I didn't get to ask the question of ONGA when they were here, that apparently the combustion turbine units in North America are on hold. They have them on the shelf ready to go to Third World countries and be used there. Why are they currently on hold in North America?

**Mr Barnstable:** I'm here today representing Sithe Energies from the US. We have about 2,000 megawatts of generation in the US and Canada. One of the colour photographs in the handout, the 152-megawatt Cardinal facility, is owned by us. We are the builder, owner and operator of the 1,000-megawatt plant in upper New York State at Oswego that was talked about when ONGA was on. Contrary to what the CNA has advised you, there has been a substantial amount of gas-fired development going on in North America. The economy, as you well know, has slowed down, so the demand for additional supplies has not been great, but there has been a substantial amount of development and it's beginning to accelerate. Right now we have about 1,000 megawatts of gas-fired projects under development around the world.

**Mr Galt:** It hasn't been stopped for regulation or environmental concerns or anything like that.

**Mr Barnstable:** No, if it was stopped in North America, it was because the economy had slowed down and the growth in demand for electricity had stopped.

**Mr Galt:** That makes sense. We had people in from British Energy talking about competition. I don't know if you've been following these hearings and some of the information we're bringing forth. You've probably been reading where they are at, the competition and privatization. Is that something you would welcome in this country?

**Mr Barnstable:** Certainly Sithe's business strategy is to be an active participant in the restructured power industry and to proceed on the basis of how the industry is going to be restructured. It will probably be restructured fairly similarly across all of North America. We intend to invest. We don't see that we will have long-term con-

tracts. We'll invest in the same way most industry invests, and we count on ourselves to compete in a competitive industry.

**Mr Galt:** Ontario is very different geographically, considering northern Ontario, rural southern Ontario, than England. How would you propose we ensure that people in remote northern communities and rural communities in southern Ontario would be provided with reasonably priced electricity in an open competitive market?

**Mr Barnstable:** I think the marketplace will ensure that happens. If you look at what's happened so far with the private power industry, this 1,850 megawatts that's been installed, much of that is in northern Ontario, much of it is in small communities. In many cases it's integrated into municipal facilities. Our plant at Cardinal, our pump-house that supplies cooling water for our steam turbine, also pumps water into the town's water distribution system.

**Mr Galt:** What about the grid? It is so extensive in northern Ontario. Yes, you may have it in one community. You may have it in Dryden. What happens in Sioux Lookout? What happens in some of these other communities?

**Mr Barnstable:** The grid already exists in the province to distribute electricity, so you don't have to be exactly —

**Mr Galt:** How would you ensure they have reasonable rates?

**Mr Probyn:** That's done through regulation. We've advocated the transmission company be disaggregated from Ontario Hydro. We haven't advocated, by the way, just to put it on the record, privatization. We feel a competitive framework can be established in the public sector if it's desired. That can be taken out and that will be a regulated monopoly. If it's regulated on the basis of postage stamp rates, then that will ensure rural and northern areas are not affected by the increased costs they experience.

**Mr Galt:** Everybody gets the same cost of having a wire to the door, like I pay \$800 to get a car delivered from Oshawa to my home about 80 kilometres down the road.

**Mr Barnstable:** It's called postage stamp rate.

**Mr Galt:** That's not a postage stamp rate.

**The Chair:** Thank you, Mr Galt.

**Mr Probyn:** They're not putting postage stamps on cars.

1620

**Mr Kwinter:** I'd like to pursue a couple of areas you touched on, Mr Probyn. One, to talk about your lame duck, I feel and I've felt this from day one, that this committee is like the Ontario Energy Board. We're going to listen to deputants and we are going to make recommendations, but there is no effective mechanism for any of it to happen under the present structure. Ontario Hydro will say: "Thank you very much. We'll see you in another five years when the Legislature strikes another select committee because there's another perceived problem." Do you agree with that?



**Mr Probyn:** I never used the expression "lame duck," I don't believe. I'm subject to correction but I don't think I used that expression. I would hope that this committee is the catalyst for the appearance of a framework to deal with our nuclear problems, and I've got enormous faith in you, Mr Kwinter, and your colleagues in achieving that objective.

**Mr Kwinter:** But it can only be done in the context of reforms that will be outlined in the white paper. The point I am making is that in the present regime there is no ability for this to happen.

**Mr Brett:** You're absolutely right about that. Hydro is effectively unregulated at the moment, as you say. It's not regulated by the Ontario Energy Board. The Ontario Energy Board has no power over Hydro. It's not regulated by the government in any conventional sense. It's owned by the government and it's subject to general policy direction, as you know, but that doesn't begin to get into any kind of overall competent supervision of the running of the company in a normal sense. So it's basically on its own, accountable to itself and accountable to no outside third-party regulation. Until that changes, you won't get changes, no. We agree with you in that sense.

**Mr Kwinter:** That's why it's so important that we have this white paper so that at least we know in what kind of an environment these recommendations we will make can be implemented, if at all.

There are two areas, one that's sort of beneficial to your interests and one that may be contrary to your interests. I hope you will set aside your particular personal interests and just comment on them.

One, there is no question in my mind, and certainly I gather from the people who have appeared before us, that whatever this white paper is, there will be competition in generation. I think that's almost a given. I can't imagine any government saying, "No, we're not going to do that." As a result, when that happens the marketplace will work and you will either succeed or not succeed, but it will have nothing to do with anything other than market forces and your ability to react to them. That is the one area.

The other area we have to contend with as a committee is this whole area of the recovery plan. You have said and Mr Taylor has said that, in his opinion, the timing in itself is a problem, because how can you do this without knowing what kind of regime you're going to be in? Plus, there is the idea, and I don't want to put words into your mouth or use words, but it seems to me, Mr Taylor, you're sort of endorsing the conspiracy theory, conspiracy in the sense that what is happening is there seems to be a perception that the reason this committee was struck was that the Andognini report indicated there are severe problems at Ontario nuclear and that these problems verge on dangerous because of the short time frame of the licences from AECB, when in fact every witness who has appeared before us who has some competence, in commenting on that, has said safety is not a problem. There is a potential problem if the maintenance doesn't straighten out, but at the present time there is no problem with safety.

I asked this question earlier today of one of the members of the board. What was the drive, what was the impetus on August 12 to make all these decisions, to take it from an information item and automatically convert it at the meeting to an action item, commit basically to a potentially \$8-billion plus expenditure, and yet safety was not a problem?

Not only that, if you're going to spend that money — this is where I say it's against your interests — if a lot of that is for replacement power, why not leave the system intact and do an orderly retrofit as you go along without requiring the massive investment in the replacement power and also the massive expenditure at one time by shutting down the number of reactors they have suggested? Could you comment on that?

**Mr Taylor:** I sure can. I want to start by saying that I have not made a judgement on the conspiracy theory, if we can call it that.

**Mr Kwinter:** No, I didn't say you said a conspiracy.

**Mr Taylor:** Let me clarify. I just want to say that I think, in our opinion, the issues before the committee, being the OH recovery plan, to repeat what I said earlier, are absolutely and inextricably linked to the white paper issues. In our company's opinion they cannot be considered independent of one another for some of the reasons you have outlined. The fact that the additional \$5 billion to \$8 billion is really what Ontario Hydro's board was faced with to consider as a result of this will have a dramatic impact on obtaining and opening a competitive market. As we have discussed, it has implications on stranded costs. All of these things point to the same fact, that these issues are commercial in nature and need to be considered in the context of a restructured market and how that can work to the advantage of Ontarians.

The other comment I might have, which perhaps contradicts what I just said about the conspiracy theory, is that I haven't read all the testimony you folks have heard at this committee, but what I have read has certainly indicated that these are not new problems. The earliest reference I recall in the reading I've done about what's been presented to you was that Ontario Hydro was first aware of concerns with regard to their nuclear plants as early as 1989. I think that confirms the view that the question of timing and urgency as we currently see it really has to be put to question by this committee.

**Mr Brace:** May I add to that? I find it interesting from my point of view that up until August 12 or so, there were years and years of discussions about technical problems at the nuclear power plants, and all of a sudden those have disappeared. I'm sitting here wondering, once we solve this problem, what are the other problems we're not addressing going to be, and how much will that cost and how long will that take? Are we heading now down a slippery slope of incremental investment after incremental investment, each one of which looks justified, but if you knew the totality of it all, you wouldn't do that at the beginning? I don't have the expertise to make any judgement on the nuclear recovery program from a

technical point of view, but I am very curious why that issue has disappeared.

**Mr Laughren:** I don't have much more to ask. I think Mr Probyn and I have almost come to a meeting of the minds, and that probably scares him more than it scares me.

**Mr Probyn:** I'm honoured.

**Mr Laughren:** I bet.

In the absence of the white paper, I do feel somewhat like a lame duck on a wild goose chase, so I think I'll pass.

**Mr O'Toole:** I just have a couple of questions. There has been a pretty broad discussion. I think the background of this committee and the credentialing of this committee is more or less kind of called an election. We're supposed to represent not your particular expertise but ask the questions the people of Ontario need answers to, namely, safety and some confidence in the costing and accounting principles involved in the recovery plan, safety being the primary concern, I guess. Everyone seems to throw it out at the beginning, so I think it's appropriate we do that as well, but I'm quite serious about that since in my riding, basically in Durham there are two nuclear plants.

We've met with some fairly formidable people much like yourselves. Mr Bullock and Mr Kerr are in themselves successful assessors of investment and initiatives, and I think they're competent people, at least their boards of directors think they are, so with all respect to your expertise, I take some confidence that they should be respected. I heard from some technical people on the board, for whom I have some regard as well, but I'm not completely blindsided by all the luxury of their credentials themselves. I still have to be humble and ask the questions.

I'm also impressed with the Ontario Energy Board. I thought Dr Bishop was formidable, with quite a lot of integrity and forthrightness, and she clearly stated many of the observations you have made: the inability to access the armour around Ontario Hydro, whether it's in rate hearings — if you read the annual statements of Ontario Hydro, they just disregard them. That's basically what they say in their summary statement number 1, "Just ignore them." We spend millions, about \$1 million per hearing or more — some of them are around \$2 million — plus your own costs as intervenors.

But the most important thing I brought up was that I'm not sure I'm satisfied with the accounting principles in their own statements and with Ms Clitheroe's responses to some of the questions. You brought it up in decommissioning charges. There's absolutely no formula I've seen that has any sense. Their ability to not have the upfront charges in the rate is evident everywhere. They can just push it off to debt, they can bring it in, they can declare it. They've written off \$7.1 billion over the last five or six years. It's troubling. The whole financial confidence as a citizen — it's troubling.

1630

We've heard, and everyone suggests, that there will be some example of defraying this stranded debt everyone

talks about, some \$28 billion or \$30 billion, on the rate somehow, that it's spread so there's no advantage for you as independent producers or the gas group or whatever group. I still think we're all going to pay. It doesn't matter if you assume the assets and liabilities and take your hits in the market, the shareholder, as a taxpayer, will somehow end up being the end loser in the equity position. I say a subsidy, a tariff, it's all a tax. I don't even care if it's a shareholder equity problem. It's distributing all this liability we've accumulated from approximately 1985 when the first evidence came in, from what we've heard. I haven't been here as long as Mr Conway and others, but certainly it doesn't give me a great deal of confidence in the plan.

If I look at the plan, the very first question I have is on a couple of issues around the statutory debt retirement issue. That's in there as one of the concerns for the cost. That's a significant amount of money. It's really not even in there technically.

There were other things besides the SDR. There was also the negative returned earnings, which is a really interesting one. That's just future debt. That's debt planning. Floyd would know all about it, because you have no choice when you have no revenue. You've got to run and they have to run. They haven't got the revenue. It's just debt. I don't care if you hold it in bonds or how you hold it.

There were the recovery plan numbers I'm trying to bring up, which I think would interest you, which are the alternative sources, the short-term solution, if you will. It runs in the range of between \$2.5 billion and \$3 billion. That's the market where your generation ability, your excess capacity could be utilized. Your industries are prepared to step up to that and be part of that process of feeding into the grid. What is the time frame? How soon can you replace what Ontario Hydro can't, or is it going to have to be Michigan or Quebec?

**Mr Brace:** As we alluded to earlier, there are probably three time horizons relevant to this question. The first time horizon is, what can be done tomorrow? That comes to the question of what capacity is there that is unutilized, that already exists. I think we talked potentially of a 100-megawatt range, that kind of thing. It's not a great quantity because the way we've contracted with Ontario Hydro has not encouraged us to build excess capacity.

**Mr O'Toole:** I'm going to move away from even Hydro itself. This is kind of related. Is there any excess capacity at Hydro? You, as outsiders, may look at the water generation side that has just been neglected really. As an asset, they've neglected it in my view. They focus entirely on the nuclear recovery and they fire up Lennox when they need it. It's just an unutilized asset. I don't know how it's not considered stranded. Even the water-powered plants themselves are small, but they are probably equal. Are those assets in good enough shape to sell?

**Mr Probyn:** One of the things that is quite interesting is that if you turn back to the first part, in terms of the number of projects there are 123 projects identified. Many



of those projects are in fact water-powered projects and many of them are dams on existing rivers that Hydro abandoned. Essentially, the private sector has been doing just that for over a decade: going in, taking over some small plants, making a go of them and then moving on to the next. I think you've already seen that process and I think you'll continue to see it.

**Mr O'Toole:** Is there much more capacity in refurbishing those existing plants? There may be some under-capacitized resource there which is environmentally friendly, in my view. I don't know how many megawatts are available in those small water-powered, but is that a significant thing? Would this industry be prepared to put those kinds of investments in if there were some assurances in the pool?

**Mr Taylor:** The short answer is yes. The structure of the market that is required to entice private equity to make investments in the province is something that has been discussed at great length in previous deliberations, including the Macdonald report, I believe.

In the submission TransCanada has made before this committee, we talk about a three-pronged approach to what we see as the necessities to an effective marketplace.

The first one of those is that you need many market players — many buyers and many sellers — to in effect create a market.

The second issue is fair and open access to the transmission system or the delivery system so that buyers and sellers can be assured they can get their product to their customers on a fair and equitable basis. That's what we talk about with respect to an open transmission system.

The third is a need to turn your mind to the question of market power concerns or mitigation of market power. One thing that this committee needs to be concerned about in any move towards opening the market is that Ontario Hydro is the single largest electric utility — I may be wrong in saying in the world, but I know for a fact they are the largest in North America. Any move that is made to open up this marketplace needs to be concerned about market power.

Our company, as a private, investor-owned company that would be investing in the power industry in Ontario would be concerned about abuses of market power at the hands of Ontario Hydro. What I'm pointing to in that third leg of the tripod to an effective market is the need for a regulator that can oversee this business to ensure those dislocations are not evident in the marketplace.

**Mr O'Toole:** When we started, I think there was some harmony or agreement with respect to the regulatory function that exists today. I think we all looked at the management and then the regulatory aspect as being an important part of the solution, which is softer than the technical solutions. Maybe we'll have a role in that, hopefully.

I'll just move away from that. We talked a lot about all the rates. Ms Johns asked all these different rate things. I'm not that well informed. Is Ontario Hydro competitive with their neighbours today — it's my understanding they're not — Quebec, Manitoba and Michigan?

**Mr Probyn:** It depends which neighbour. They're not competitive with Quebec and Manitoba. They're roughly in the mid-range of industrial states. If you look at our competitors in Ohio and Michigan, I think we're somewhat below. There are a number of tables. I think you already heard from AMPCO. The problem they have of course is the dramatic loss in our competitive standing. Going from number one to the mid-range has hurt Ontario's industry.

**Mr O'Toole:** That's where I was getting to, is technically. The large consumer groups say they want a 25% or 30% rate reduction. That's what they told us. They want and expect a 25% to 30% rate decrease because of the competition and the eventual framework of competition aspect. Provided you get the volume to offset your investments, if you've got part of the volume, could you deliver at lower rates than we have today?

**Mr Probyn:** Absolutely. We've already demonstrated that. In fact I spent this morning in a meeting concerning an industrial cogeneration plant we're looking at in Alberta where we have to compete with very low rates indeed. They are around three cents a kilowatt hour. I should add, by the way, that Alberta is a cheaper environment because the gas is cheaper.

**Mr Kwinter:** I don't know who can respond to this. I'm sure you can. I wanted to ask this question of the Ontario Natural Gas Association. It's just a matter of information. When they were talking about the bringing of gas from the west, they said the capacity of the existing pipelines is such that they don't use all of the capacity right off-line; they store it. I think they store it in the salt mines or somewhere, wherever they do it.

1640

What I'd like to know is what percentage of the daily, weekly, monthly, yearly use comes out of the storage capacity? What I'm trying to find out is, with the existing infrastructure, if there wasn't the storage facility, but just coming right off-line all the time, which would mean you'd get more — I assume; I don't know. I don't know how it works. Is there someone there who could tell me about that?

**Mr Brett:** We would have to get that number for you. If we did not have the storage that we do in Ontario, we would have to have more pipeline capacity built, because we would have to be able to handle the peak day volumes coming through the pipeline. The function of the storage, as you know, broadly is to reduce the amount of pipeline space you need to build because you can draw the gas in over the year, throughout the year, put it in the storage and then in the winter when you hit your peaks you take some directly from the pipeline, but you take the balance out of storage. So there would be a lot more pipeline infrastructure that would have to be put in place if we didn't have the storage capacity that we do.

**Mr Kwinter:** What kind of capacity? Do you have any idea how much capacity there is in that storage facility?

**Mr Brett:** We don't have that number. We could get that for you.

**Mr Conway:** I just had a couple of other questions. I noticed in your brief — it's "Ability of Private Power Industry to Increase Ontario Supply" — it's early in the brief, that chart, "New Supply Capability," and I'm looking at the category, "Mid Term to Long Term (Beyond two years)." You may have dealt with this — excuse me if you have — but I was struck by the 1,200 megawatts of new hydro-electric.

**Mr Barnstable:** Yes, that 1,200 megawatts includes — I mentioned previously, I guess you were out of the room, that Ontario Hydro has a hydraulic development program, or had one a few years ago, and it had about 1,800 megawatts of new capacity they could build.

**Mr Conway:** I'm quite familiar with it.

**Mr Barnstable:** This 1,200 megawatts represents small hydro developments that Hydro wouldn't normally touch plus what I feel the private sector could manage quite easily out of Ontario Hydro's sites that they identified —

**Mr Conway:** Give me a couple of examples. The reason I mention that is, you know, I represent a constituency where we have a half-dozen fairly large power dams and I look at them with great marvel because, I'll tell you, as a politician I don't think we'd be building any of them today. I might be wrong, but I don't think we would be building the great dam at Rapides-des-Joachims or the one at Arnprior or the one at Stewartville easily today. Those are big projects and I presume you're not looking at anything that large.

I remember talking to Hydro about this and being quite impressed by their numbers and then the government — I guess our government and then the NDP government. There were a couple. What was it, the Magpie development? Was that the Magpie River? That was done.

**Mr Barnstable:** That was developed by Great Lakes.

**Mr Conway:** That was Great Lakes. These things are not easy.

**Mr Barnstable:** No, most of it is northern rivers, and you're absolutely right. I'm familiar with the dams you're talking about in your constituency. They're essentially peaking plants and they have a lot of reservoir. If you ever go down the Madawaska River in a canoe, you've got to pick the right time or there's no water.

**Mr Conway:** I presume the aboriginal community has no objections to any of these projects north of 50 or north of 25.

**Mr Barnstable:** Well, no. Ontario Hydro's plan, as you know, is they have to follow the Environmental Assessment Act, and I believe on the Moose River the Environmental Assessment Act is still in play. But a lot of this potential that is Ontario Hydro sites are in northern flowing rivers. There are some that flow into the top end of Georgian Bay, but the more economic sites tend to be in the northern flowing rivers plus development that Hydro had proposed at Niagara.

**Mr Conway:** So it's largely that Hydro plan —

**Mr Barnstable:** Plus 200 megawatts or 300 megawatts of very small — the type of stuff our members have developed over the last 10 years.

**Mr Conway:** On that, I've been involved with some of your members who have done yeoman's service bringing those small hydro plants into production. Just in general terms, looking back over the last 10 years, how would you characterize and summarize the experience of those small hydro-electric projects that dotted the landscape?

**Mr Barnstable:** My first experience with those was when I was given responsibility to begin contracting with some of these. In fact, it was one of your constituents who showed up on Hydro's doorstep and said he was going to be ready to operate in two weeks and when we were going to connect them to the power system.

**Mr Conway:** My constituents are very interesting.

**Mr Barnstable:** I kind of looked at some of these people as slightly off the wall, but I'll tell you, my opinion has changed very much since I worked with them. These were very much small business men who dug in. They found ways of doing things at much lower costs than Ontario Hydro could have ever done them and they ended up with quite reliable plant, and in many cases those plants have changed hands at quite substantial sums and are invested in by fairly big holdings today.

**Mr Conway:** A final question comes back to one of my favourite bugbears, and this is this whole issue of local or regional power. Imagining a world now where Ontario Hydro is going to be much less of a player than it has been, and we were once there, a long time ago. It's hard I think for people today to imagine a world where Hydro isn't the backup. Let's be realistic. In the last number of years Hydro, for all its problems, and there were many problems, one of the values that Ontario politicians were told about on the energy equation for many decades was reliability.

I live on the Quebec border. One of the things my constituents in eastern Ontario have generally observed is our system has had a higher level of reliability than the system in western Quebec, though the reliability of the western Quebec system seems to be getting better. If you lived in the Ottawa Valley, certainly the reliability of Ontario Hydro was thought to be, and I believe it was, substantially better than the system in western Quebec.

If you imagine a situation where Ontario Hydro as a monolith recedes and we've got a much more competitive marketplace and the world, which I gather most people agree, is going to see more local, smaller facilities closer to load, because of technology and some of the problems of transmission and whatever. I look, for example, back at some of the power that the Hydro-Electric Power Commission of Ontario got, it never built and it didn't want. But in a locale often in northern or rural Ontario, a very good project hit some very rough weather, and because the commodity that was being delivered was electricity, a more political commodity it is hard to imagine in a country this large, this empty and this cold five months of the year — I continue to be amazed at the number of people in this debate who think that Ontario is really kind of Connecticut tucked in the bottom end of California; that's the operating assumption. It's big, it's empty and it's cold,



and electricity is a very important commodity in that connection.

Should the politicians, particularly those of us from rural and northern Ontario, worry at all about a brave new world wherein we might have a situation where Laughren Light, Heat and Power got off to a really good start up some place in the Nickel Belt, and then something happened in the capital markets, in management, in supply or whatever that sent poor old Laughren Electric to the canvas and the local member was besieged by a lot of people who suddenly had a problem. Is that a possibility at all?

**Mr Probyn:** I was thinking about your remarks, Mr Conway, in terms of the early years of power. It's a fascinating historical study and probably not one that we should be discussing here, but I think there are a lot of lessons: the development of power, the hydro-electric commission, Sir Adam Beck's role in really distancing Hydro and insulating it from the influence of the government of the day. I think those are important things that shaped a lot of the perceptions of power and there's a lot of idealism that went into those years.

**Mr Conway:** On that, let me be specific.

**The Chair:** Let him finish off this answer.

**Mr Conway:** The Beauharnois project, fascinating engineering —

**The Chair:** Let him finish it off, Mr Conway.

1650

**Mr Probyn:** My point is simply that we have a large integrated grid that has been built on the backs of the ratepayers of this country; it's very sophisticated, and what we are saying is it's time to move that into a new era. We're not even saying here, "Move that into the public sector," but we're saying you've got to introduce transparency. The system has become kludged up with bureaucratization and we have to move towards change because it has not been serving the people well.

**The Chair:** Thank you for your answer. I think, given the hour, I'll begin to wind down the questions now. I think we have exhausted the testimony for today, and I appreciate it.

I do have one question to ask of you before you go, Mr Probyn, or any member of the panel. In this document with the charts — if you turn to table 1 just for a moment — I was intrigued with the figure that's given for nuclear at 5.508 and NUGs at 6.08. I wonder if, in dollars, you could indicate how much the cost overruns would have to be to increase the cost by that 0.5.

**Mr Barnstable:** It would be about \$400 million a year at the 1996 production level for nuclear. According to the recovery plan that's going to drop even further than it was in 1996, so the result is it would carry less money with the same rate increase.

**The Chair:** I wonder if you can identify the circumstances, realistically, under which that cost could be incurred, the circumstances under which that nuclear cost would increase?

**Mr Barnstable:** Would decrease?

**The Chair:** Increase. You can do it later if —

**Mr Barnstable:** I'm not sure I understand your question. Give me a couple more clues.

**The Chair:** Your position is that you are very close to the Ontario Hydro figure.

**Mr Barnstable:** We think we're quite a bit lower, actually, if they counted all their costs.

**The Chair:** There are some assumptions lying in there and I'd like to see them spelled out. I wonder if you could just take the testimony and pick up the Hansard and perhaps, instead of taking the time now, take a look at that. I'd like to see how realistic those costs are.

**Mr Brace:** Could I make one point?

**The Chair:** If you could speak with our consultants before you leave, I'd appreciate having that information tabled with us, if you wouldn't mind.

**Mr Brace:** Mr Shea, may I make one point?

**The Chair:** You may, indeed.

**Mr Brace:** It's important to note that that cost table looks at the historical costs. It's not talking about the future, and the future is what we're here about. The future is I think — private power can build new facilities in this province given the right circumstances. Private power will take the risk and the responsibility for those investments and suffer if we fail. We can compete with new facilities and the new pricing world and the new competitive world.

**The Chair:** I understand that, but the afternoon has been built on a number of assumptions and some negotiated positions, whether it's stranded assets or whatever. I want to see your figures —

**Mr Probyn:** Mr Chair, if I could make one final comment on that? The nuclear assumptions are very subject to factors such as availability. Availability is critical. If you look at Ontario Hydro's numbers over the past 15 or 20 years, they've always assumed an 80% availability factor of their plant. As we know, even prior to the problems that we've experienced in August and which you're reviewing, that availability seldom nudged much above 60. The differential is a billion-dollar issue. It's one of the reasons why nuclear has not succeeded in this province. Availability is critical.

The life of the assets, and we made reference to that, is also critical. One of the problems we've seen with nuclear is every day is a new day. People thought zirc alloy tubes were going to last for 40 years, and 15 years later they're replacing them at enormous cost. The problem with the technology is that it is not predictable. We have seen assumptions that seem — when you say 60% or 80%, so what? It's the difference between solvency and insolvency of our generation system.

These are the things that are critical and obviously the agenda, in part, that's before you is to really deal with these. We can supply more information on how the variability of these assumptions impacts on the costs but, as I say, there are technical factors that are really making the whole future of the technology in doubt.

**The Chair:** I appreciate that, Mr Probyn, and you'll appreciate that for the last few days this committee has in fact been plumbing some of those depths and has been going through those waters with some speed. I would still

nevertheless appreciate the assistance of your group to provide that information, if you can speak with the consultant before you go.

**Mr O'Toole:** Mr Chair, on a point of order: I'm looking at this small brochure. I gather you're one of the sponsors of this conference. I'm asking, through the Chair, if there would be value in members of this committee availing themselves of this?

**The Chair:** Mr O'Toole, that is not a point of order. It is a very interesting piece of information. You may wish to speak with Mr Probyn.

**Mr Probyn:** We'd be delighted to have you.

**The Chair:** Thank you very much. I appreciate your attending upon the committee. We appreciate the evidence provided and we look forward to receiving more information from you later.

**Mr Probyn:** Thank you very much indeed.

**The Chair:** Members of the committee, before you go, there are still several items yet to meet about. I want to remind the subcommittee members, if they could wait for a moment, I'd like to be guided by subcommittee on one piece of information that we will deal with shortly.

For the minutes, let me remind members that there has been a response to my letter to the chairman of Ontario Hydro that went out two days ago. It has come back in a timely fashion, and I would ask members to read that.

In this room, I remind members this meeting is still proceeding and I'd like your courtesy. Please, if you'll make note of the letter that's tabled with us by Mr Farlinger.

There is a letter that has been circulated from Mr Gilles Pouliot, which is to be taken in the spirit in which it is forwarded. We appreciate his thoughtfulness. I am a little surprised to see members of the House fighting to be members of this committee, and indeed standing in a row. I appreciated his comments.

**Mr Galt:** I do hope that it's recorded in Hansard.

**The Chair:** We will try to keep it out if we possibly can, but we appreciate his thoughtfulness.

The final matter before us is the agenda for next week. This essentially deals with the subcommittee, but since we're all together, I would welcome your input, please. Monday, you will see, is very clearly delineated and I think that's probably agreeable to us all. Tuesday there is still some fine-tuning to work out following Marc Eliessen, and I welcome your thoughts. Then we go to Kincardine for the hearings.

**Mrs Fisher:** Mr Chair, can we go back to Tuesday?

**The Chair:** No, I want to get on to Kincardine for a moment; that becomes more important for just a moment. Let me get on to Kincardine and deal with an issue that concerns the timing. We have a request for a number of deputants and we have a request for the amount of time various groups will be meeting. I'm going to ask Donna to very quickly walk us through the recommendation at this point. There may be need for some fine-tuning. If we can deal with that quickly, we can get on to the question of Tuesday.

1700

**Clerk of the Committee (Ms Donna Bryce):** The subcommittee members have in front of them a list of the groups that have requested to appear before the committee in Bruce. I've divided it up into three different areas: municipalities, organizations and industry, and there are also employees or individuals who want to appear. What I need the committee to do is decide how much time they want to allocate to the various types of groups.

**Mr Laughren:** How many hours do we have?

**Clerk of the Committee:** The committee anticipates meeting Wednesday evening — it's up to you how many hours you want to meet for — and Thursday morning, and the committee is planning on heading back to Toronto early afternoon.

**Mr Laughren:** If I may, that imposes a particular discipline upon us if we're going to hear from the number of people who want to be heard from. It would seem to me, if I were thinking out loud on it, it would be to give communities such as the town of Kincardine and Port Elgin an hour as a lot, given the problems, and give everybody else a half-hour, including the organizations. I don't know how else you're going to get everybody in.

**Clerk of the Committee:** So you're saying to have the municipalities come together as a group for one hour?

**Mr Laughren:** For one hour, and then everyone else, since they can't come as a group, by and large, for half an hour.

**Clerk of the Committee:** What about individuals?

**Mr Laughren:** It's hard to go less than half an hour, unless you want 20 minutes.

**The Chair:** I don't think we have enough time. I think we can work in shifts for the night, but we may want to —

**Mr Conway:** We've done that before around here.

**The Chair:** We have indeed, and other jurisdictions too, Mr Conway.

**Mr Conway:** I want Bob Wood on my shift.

**Mr Kwinter:** Can I suggest that we work it backwards, that we figure out the amount of time we have and know that we have waiting — I don't mean waiting to do something, but strength — that the largest amount of time be given to the municipalities, the next to the groups and the least to individuals, and then work out what is a realistic number that gets them all accommodated within the time frame we have available to us.

**The Chair:** We had been looking at things in the order of, certainly for each individual, at least 10 minutes to make a presentation and have questioning. We've been looking at the employee packages as something in the order of 20 minutes, the mayors 20 each, which is not far off what Mr Laughren is suggesting, and there was a suggestion from Mrs Fisher that we give each group a half-hour. That may be a little more than we want to do for each group, but certainly if we were to say 20 minutes for that group and blend it out from there, it may work out, subject to Donna and I sorting out the final time capacity so that the committee is still very bright-eyed and bushy-tailed throughout the entire hearing.



**Mrs Fisher:** What's the number of hours we have if we do that for seven hours, if we go with half an hour for each of the municipalities and the organizations, and then put together those at the bottom?

**The Chair:** We have a total of about six hours.

**Mrs Fisher:** If we can work a little bit harder and go from, say, 6 to 9:30 and start the next morning at 8:30 and end at noon, we'll pick up the extra hour. That would give each of the municipalities half an hour, that would give each of the organizations half an hour and that would give the group at the bottom an hour to share between them, because they're somewhat represented by the others as well.

We had a special request to have Harold Hergott as a representative —

**The Chair:** Mr Laughren.

**Mr Laughren:** My concern is, and I know it's important for people in the local community and I appreciate that, but to have an individual company come forward — for example, we've tried very hard to have associations come before us in order to accommodate them, and here we're talking about individual companies. I don't know how we can accommodate that. I don't think we're doing them any favour if we prolong this to the point where people lose interest and we're too tired to function anyway.

**Mr Conway:** I was just going to suggest, on the municipal thing, and I'd be interested to hear from Barb on this, it seems to me that the municipal presentations, I've got to believe, will have a similar core with some variation. I want to spend a good bit of time with them, but I'm just trying to imagine if it would not be useful to have them come as a group, just like that group we had here from IPPSO. That was a pretty varied group, but it's that kind of thing, and it would be close to, I guess, an hour and a half.

I just think it would be more useful to have them as a group and they could decide. We'd want to give them a good chunk of time, but I have a feeling it would be more efficient both for them and for us. If they each come and use time to just repeat ground that somebody has just finished —

**Mr Laughren:** And questions too.

**Mr Conway:** — and for questions, as Floyd says, I think it would be a much more efficient use of time.

**Mrs Fisher:** In normal practice that would seem reasonable, but if I could explain a little bit of the different nature of even the municipalities, I think it would be helpful here.

Bruce township is the most significant. It is the host community itself. It is a township, not even a town, the host community itself to Ontario Hydro. Between the changes that will happen at Ontario Hydro and the restructuring issues, it has a whole slate of different significant issues, different from the two major host communities in population where the workers live and work.

Where they differ again, then, between Kincardine and Port Elgin is that Port Elgin progressed in a more junior way than Kincardine did in terms of the incoming staffing-

up. Therefore, Kincardine has not been affected, I would say, to the same magnitude yet, but will now be, as Port Elgin in the past. When the 708 were laid off, Port Elgin took an exceptional hit on that because they were the junior workers. To be very honest with you, there is a different story to be told there.

The third thing is as a county. When you look at the big picture and how it affects beyond the border of just the lakeshore and the rest of the county, I think that has something to say itself. I don't mean to suggest you wouldn't know that, but —

**The Chair:** Ms Fisher, I appreciate that. You've very clearly laid out the point and I think the committee appreciates that. Now we'll let members respond to it.

**Mr Laughren:** I understand local niceties and so forth, but it seems to me, in my mind, you're making an argument for having them all there together so they can explain the differences to us and so forth. Give them a little more time, fine. I'm not trying to cut them out by any stretch of the imagination. I think they're more important in the local community. But I see that as an argument for bringing them together so that there's an exchange there.

**The Chair:** Let me remind the committee that we will begin the hearings at 7 pm on the Wednesday night and we'll go through until 10 pm, and we'll meet again from 9 until 12:30 on the Thursday. Within that period of time, we're trying to fit as many people as we possibly can in the most appropriate fashion. When we arrive there, of course, there is sufficient time that is necessary for this committee to do the appropriate visitation, ask the appropriate questions and then move itself to the location for the hearings.

There's just a physical impossibility of going beyond certain numbers of hours unless we're prepared to go late into the evening, which is often an abuse of those who wish to come and speak to the committee as well. My guidance for you is to try and do the grouping as suggested and to be as generous as we possibly can, but individuals themselves have a right perhaps to say they would like to have at least a few minutes to speak to the committee and present themselves.

**Mr O'Toole:** This is somewhat related. I'm looking at a format for the correspondence for the region I'm involved with. I think the roles are somewhat different, but just for the sake of the committee, I think the structure for Donna perhaps inviting people directly would be the region of Durham, which looks after the whole Durham. There's a common emergency plan and all those kinds of things. That's a regional issue that could be dealt with at either site depending on where we have the most time, but it does not need to be dealt with at both sites.

The next would be the host community, of course, Pickering. There are some different issues in Pickering. The other one, the Darlington, is Clarington. Within Pickering there will be people perhaps from Whitby and Ajax who want to get involved somewhat, but I think it should be the host community in my area, for the sake of giving the municipal perspective. If the Ajax mayor has an issue, they can share the time. That's their issue.

**Mr Conway:** How is our list looking for Ajax and Pickering? We had three or four people on it. Has it gotten bigger?

**Mr O'Toole:** I would appreciate seeing the list. I have not seen it. I can help, because there are a number of players. If some of the louder voices are not on there, I can probably tell.

**The Chair:** I'm obviously trying to focus on next week principally. Pickering is important and that comes the week following. The best I can offer, then, is to take the guidance that I've heard today and try to keep us within the parameters of the hours that we've got here. Unless I hear to the contrary from members of this committee, it is from 7 until 10 and 9 until 12:30. Unless I hear opposite to that, that's the time I propose to stay. We will try to keep in mind the balance with mayors and so forth.

**Mr Conway:** One of the things I think we can do too — this coming from me should be a major admission. It will be really important for people to make presentations. As we work our way down the list, it may be that the time for questions doesn't have to be as extensive.

**The Chair:** A matter of self-discipline.

**Mr Laughren:** I was just going to ask if all the people on this list had been told that they will be on the agenda. They haven't been?

**The Chair:** No.

**Mr Laughren:** I go back to my point about an individual company. I don't know why we have an individual company allowed to make a presentation to the committee.

It's incredibly self-serving and gives them — I mean, other companies won't have the same right. Okay, they got in there and put their name in, fine, I appreciate that, but I just don't like the idea of an individual company making a pitch.

**Mrs Fisher:** I'd really like to address that. I was hoping to get back to that. There are four companies listed here. I haven't talked to these people so I wouldn't know, but I can tell you why the three bottom companies are there: They are fed by the steam line from Bruce A. Their whole business is in jeopardy, their whole livelihood is gone if something isn't done.

**Mr Laughren:** Can we put them together?

**Mrs Fisher:** They're in the Bruce Energy Centre, and I think they have an absolute dependency here.

**The Chair:** Thank you, Ms Fisher. I appreciate that. May I, then, facilitate matters for the committee. You know I will try to do the very best I can; you know I will try to be as accommodating as I can. I have listened to all of the presentations and I will try to sort this one through to the best of my ability. Will you find that acceptable? Thank you very much. I think we've dealt with this matter. I will then do the best I can, seeking able help from the Vice-Chair if I require it.

Any other business to come before this committee? All right. The committee will stand adjourned until 1400 hours on Monday, October 27, and that will be in closed session.

*The committee adjourned at 1712.*



## CONTENTS

Thursday 23 October 1997

Municipal Electric Association .....	H-258
Mr Kent Edwards	
Mr Tony Jennings	
Mr John Murphy .....	H-265
Canadian Nuclear Association .....	H-272
Mr Murray Stewart	
Mr Colin Hunt	
Ontario Natural Gas Association.....	H-279
Mr Bernie Jones	
Mr Paul Pinnington	
Mr Juri Otsason	
Mr Bruce Rogers	
Independent Power Producers' Society of Ontario.....	H-286
Mr Tom Brett	
Mr Bill Taylor	
Mr John Brace	
Mr Al Barnstable	
Mr Bruce Ander	
Mr Stephen Probyn	

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**Select committee on  
Ontario Hydro nuclear affairs**

**Comité spécial des affaires  
nucléaires d'Ontario Hydro**



Chair: Derwyn Shea  
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## LEGISLATIVE ASSEMBLY OF ONTARIO

## ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

SELECT COMMITTEE ON  
ONTARIO HYDRO NUCLEAR AFFAIRSCOMITÉ SPÉCIAL DES AFFAIRES  
NUCLÉAIRES D'ONTARIO HYDRO

Monday 27 October 1997

Lundi 27 octobre 1997

*The committee met at 1703 in room 151, following a closed session.*

**The Chair (Mr Derwyn Shea):** The committee will now meet in public. We have completed about three hours of confidential testimony that has ranged over a number of issues, including security. That will not be the subject of any public discussions. The committee will take that information unto itself for private consideration when it writes its report.

## ONTARIO HYDRO

**The Chair:** We now begin with the open briefing sessions and our first session is with Ontario Hydro. We will deal with the fire and emergency response protocol. Mr Ferguson, welcome back to the committee. If you would be good enough for the purposes of Hansard to identify yourself and your colleague, then we are in your hands for your presentation.

**Mr Robert Ferguson:** My name is Robert Ferguson. I am the vice-president of technical support for Ontario Hydro Nuclear. On my right is Mr Bob Tulk. He is in charge of the fire protection program in my division for Ontario Hydro Nuclear.

I am pleased to be able to have this opportunity to brief you this evening. Just a housekeeping question: I have several copies of papers if you would like —

**The Chair:** I'll have them picked up now. We'll distribute them to members of the committee immediately.

**Mr Ferguson:** I don't know how many there are. I don't know if there are quite enough.

**The Chair:** Thank you.

**Mr Ferguson:** As they're passing these out, I'll continue on.

As you said earlier, fire protection and emergency preparedness are the subjects and I would like to begin first with the fire protection program, if that's satisfactory.

As background, on August 13 of this year the chief nuclear officer of Ontario Hydro, Carl Andognini, held a press conference to discuss the results of the IIPA report dealing with a broad range of issues affecting performance of the nuclear stations. One of the areas examined, and it was openly critical, was the state of the fire protection program. The report was released to the public at that time.

Also I'd like to comment on one item that seems to be in the news today: the so-called "volunteer firefighters."

Our volunteers are being portrayed as being inadequate and not fire protection professionals and I somewhat take offence at that. It's important to recognize that our emergency response people are trained in firefighting, first aid, CPR, confined-space rescue and handling hazardous materials incidents. We also have a full-time professional emergency response person in the shift emergency response coordinator, what we call the SERC position. I will get into this a little more later.

We are in the process of defining and implementing programs to further enhance the overall level of fire protection at all our facilities and would like to take this opportunity to go through the program focusing on three areas: (1) the most significant findings in the IIPA report; (2) the immediate actions that we have taken and continue to take; (3) the actions that we will be taking in the future.

In regard to the IIPA report findings, the first and, in my opinion, the most important finding, which shouldn't be overlooked, is the conclusion by the team that the stations are being operated safely. With regard to fire, this conclusion is based on the manner in which Candu stations are designed and on the capabilities of station emergency response personnel.

The Candu design effectively employs what is known in the industry as a defence-in-depth approach, which provides protection by duplicating and separating nuclear systems. A typical Candu design has two separate shut-down systems and two heat removal provisions that are physically separate from one another. Duplicate support systems, such as power and service water, are similarly separated from one another. The ideal is to prevent an event, such as a fire, from simultaneously disabling both means of shutting down and cooling the reactor. Based on this design approach, the IIPA team of independent experts found, and I quote, that the "design was robust with respect to fire protection."

The review team also found that the firefighting strategy had been predicated on manual response to fires. Candu stations are designed with an open architecture — meaning there are large spaces and they're not confined like they are in the United States where it's compartmentalized — that facilitates maintenance and provides relatively easy access for the emergency response teams to extinguish a fire.

The volunteer emergency response teams, or ERTs for short, are composed of station personnel: typically, mechanical maintainers, control technicians and technical



support staff. In addition to their regular duties, these individuals are trained to respond to a host of emergency situations, including fire, first aid, CPR, confined-space rescue and hazardous material incidents. The emergency response team training program is of a standard very similar to that received by municipal firefighters. In fact the municipal crews use our fire training facilities at both Wesleyville and Bruce.

#### 1710

We have mutual assistance agreements with municipal fire departments and, in the past, we have had reciprocal staff exchange programs with them. Several of our ERT members are also volunteer municipal firefighters, and it is noteworthy that our ERT and municipal crews typically have a high level of mutual trust which, given the potentially life-threatening nature of firefighting, speaks directly to the competence of our crews.

One of the unique features to our approach to fire protection is the full-time shift emergency response coordinator, as I mentioned earlier, the SERC. These individuals are the incident commanders — in other words, the person in charge; if there is a fire, that's the person to get to and that's the person who takes charge and they are full-time in this job — whenever the emergency response team is called to respond. The SERCs do a very good job of keeping us informed — management, I mean — on areas that need improvement and keep us moving forward to resolve fire issues.

The IIPA report was, however, critical of the lack of a clearly defined fire protection program. The report found that corporate and plant restructuring was required to provide fire program leadership and awareness of fire hazards. It found that a clearly defined OHN fire policy with supporting standards was needed to provide the required framework to address fire issues. It found that fire training programs need to be delivered to enhance employee fire awareness and develop professional fire personnel. It found that detailed nuclear safety fire assessments need to be performed to ensure and demonstrate adequate fire protection is provided, and that the amount of combustible material in the stations, for example, paper towels, filing cabinets, coat racks, wood pallets, floor cleaning materials etc, needs to be managed and reduced.

While we presently have a minimally acceptable level of fire protection, we are taking action to address the IIPA findings to raise our level of performance.

Turning now to the immediate actions we have taken and continue to take to reduce the fire risk at our facilities, two initiatives are under way.

The first involves the removal of combustible material at each of the stations. The intent of this program is to remove combustible material that doesn't need to be there and to implement procedural controls to appropriately handle or minimize the amount of material being stored within the station. To date there has been a notable improvement in the level and treatment of combustible material in all stations, but we need to continue this effort.

The second initiative is a fire protection design improvement program which targets three high-risk areas at

each of the stations: the main control room and the associated control equipment rooms, the cable spreading areas, and the turbine generators.

This program is well advanced. We will be tendering for design-and-build contracts for new or upgraded fire detection and suppression systems in each of these areas early next year. The cost of this program is estimated to be \$25 million for all the stations.

In terms of the actions we will be taking in the future, we are currently planning to implement a fire safety improvement program that will be implemented over the next five years and will cost approximately \$151 million; 75% of this program will be completed in the next three years. Such a program clearly indicates Ontario Hydro's resolve to improve fire safety at our nuclear facilities.

Currently we are engaged in discussions with the AECB concerning the program's scope and content which will contain seven basic elements.

The first two are the transient combustible and the design improvement programs I mentioned earlier.

The third is a program to develop an OHN fire policy with supporting standards. This program will run concurrently with the other initiatives and will result in a comprehensive fire policy by the end of the first quarter of next year. Supporting standards will be developed throughout the 1998 and 1999 calendar years in parallel with overall program needs.

The fourth initiative is to restructure the emergency response teams at each of the stations. We have determined that dedicated emergency response team crews are required to prevent station maintenance interruptions due to training and minimum shift complement requirements. Moving to these full-time ERT crews will create 80 full-time firefighter positions at each station. I think that's worth repeating. It will create 80 full-time firefighter positions at each station. ERT personnel will perform the routine maintenance on fire protection systems, as well as other non-critical duties. This approach focuses fire training and maintenance responsibility on one work group. We believe this approach will result in superior fire system maintenance and station ERT crews being equal to the best municipal fire department in the province. We will be selecting and training personnel for this program in 1998.

The fifth initiative is to develop fire training programs to heighten fire awareness of our staff and to develop professional fire expertise within the organization. One of the training programs presently being developed is fire awareness for our senior management. This education program relates actual fire experience at nuclear and industrial facilities to the management infrastructure breakdown that led to the fire. This training will begin in 1998.

The sixth program is to conduct area-by-area reviews of each station to identify and assess fire hazards. Currently we are discussing the scope and methodology for conducting this work with the AECB and these assessments will start in 1998.

The seventh initiative will be to address the results of the fire assessments.

We believe this seven-part program will move Ontario Hydro Nuclear to the forefront of fire protection. In particular, the ERT restructuring program will result in superior fire system maintenance and station ERT crews being equal to the best municipal fire department in the province.

Now I would like to entertain questions.

**The Chair:** Mr Ferguson, we appreciate that very much. As you know, we will proceed in rotation by caucus asking questions. We will begin the first round with the government caucus and we will begin with Dr Galt.

**Mr Doug Galt (Northumberland):** I was interested in some of the contracts you were talking about. One is at \$25 million and one at \$151 million. Do you plan to out-source that or will you be looking at doing that in-house?

**Mr Ferguson:** It's a combination. It really will be. We have a lot of people internally, and where we have the talent internal, we will do it internally.

**Mr Galt:** What percentage are we talking about?

**Mr Ferguson:** For example, like the \$151 million, a lot of it is hardware and this sort of thing. All that money is not just labour. Therefore, obviously we will be buying the hardware from wherever after we design it, get it specified out and we will be outsourcing some and doing some within. I can't say much else other than that. The work we do not have the expertise to do in-house, we will indeed be bidding that work and outsourcing.

**Mr Galt:** I'm just concerned about how Hydro has evolved in the past. There's been so much in-house. I was noticing some other operations in other provinces where they've outsourced and they now have a very viable industry going worldwide building hydro plants and we still have Ontario Hydro and really didn't get anything more than, I might sarcastically say, a great big debt where we are today.

**Mr Ferguson:** That's a worthwhile comment.

**Mr Galt:** Yes. I'm really concerned that we are not outsourcing enough and are trying to do too much in-house is where I was coming from.

My second question relates to the 80 full-time firefighters you would have at each station, I think is what you said in your presentation.

**Mr Ferguson:** Correct.

**Mr Galt:** When you say "each station," is that like the five stations?

**Mr Ferguson:** No. It's like the three stations; actually the four. I don't know how we're going to do it at Bruce A because they're going to lay up Bruce A and naturally you wouldn't need quite the fire complement at A until you brought it back.

**Mr Galt:** Right.

**Mr Ferguson:** For example, for Pickering, all of Pickering A and B would just be the 80. Darlington would have 80. So when we say station, that doesn't mean Pickering A and Pickering B each get 80. It would be 80 because that's all one unit, as you're well aware; in other words, one facility, if you will. Then there would be 80 for the Darlington facility. Then on the Bruce, I don't know, Bob, if that's been resolved.

1720

**Mr Bob Tulk:** We're looking at 80 people at Bruce B and we're looking at probably a combination of 80 at Bruce services — the plant area, the general area, the support infrastructure around the Bruce site, as well as Bruce A. We still have assets there that we want to protect, so we would want to have a fire crew available.

**Mr Galt:** How many are there now?

**Mr Tulk:** We have volunteer teams. The team minimum complement is 12. We typically try to schedule 16 to allow for vacations, holidays, training, that sort of thing.

**Mr Galt:** Being classified as full-time firefighters — we hope there are not that many fires there — are there other activities you can effectively and efficiently use these people at other than sitting in the fire station waiting for a fire?

**Mr Ferguson:** The answer is yes to that. We're also hoping we're not going to have full-time for them, but they have to be trained and they have to be ready.

**Mr Galt:** That's their first job.

**Mr Ferguson:** That's number one. That's their first job. Then they will do maintenance, for example, on the fire equipment itself, plus the fire equipment in the stations; in other words, things like where you have sprinkler systems, fire hoses and any other devices you need to fight the fire with. They will maintain those. If that isn't enough to keep them totally busy, then we will put them on some other work, but it will not be that kind of work they can't just drop right in a minute in case there's a fire or something else. In other words, we wouldn't want to put them in all dressed up in a particular radiation suit or something like that and be locked back in here in a place they couldn't get out of easily. So that's the kind of work, but the answer is yes, we will be having other work for them to do.

**Mr John O'Toole (Durham East):** I'm very concerned about this, just in response to the program on the CBC and the fact that I live in the Darlington and Pickering area in Durham region. I want you to comment quickly. How accurate was that portrayal on the CBC in terms of the risk to the community, in terms of the casualness in the approach to fires, some 30 events? Could you comment? Were those events significant? Was it a paper towel or was it a major piece of construction material? What actually happened?

**Mr Ferguson:** I can comment some on those events. There were really 34 fire reports. Out of those 34 fire reports, 12 of them were due to alarm malfunctions. In other words, when the alarm itself fails, it fails safe, if you will, so 12 of them were non-fires but the alarm failed. Three others were false alarms due to grinding dust and that sort of thing. Out of the 34, 15 of them were non-fires entirely.

Eight were overheated equipment like bearings. On a piece of equipment, for example, a bearing would start smoking. In fact there was one today at Pickering, on exactly that, and indeed the fire department was called. Our sensitivity has been increased over the last year or



two years as to making more calls and trying to be superconservative.

The other 11 were flame, sparks, smouldering cigarettes etc.

In the AECB report, it said two events out of the 11 occurred in the main control rooms. For example, on April 2, 1996, smouldering cigarette butts were dumped into a garbage can that contained paper located in a designated smoking area. In other words, it was in the control room but there was a designated smoking area. They had some smouldering cigarette butts and they dumped them into a garbage can containing paper. That's not what a person wants to do.

**Mr O'Toole:** I wonder, for the sake of time — I have two or three questions — if you could leave a copy of that summary with the committee. I would appreciate it as a reference.

**Mr Ferguson:** Sure. Of course.

**Mr O'Toole:** The other part of it is, I'm surprised you wouldn't have a non-smoking policy in the area to begin with, but that's for you to decide. You can put all the fire detectors up you want, but you should take the pre-eminence of watching fire hazards at that level.

Are there sprinkler systems? The report led me to believe there wasn't a wide distribution of sprinkler or halon systems in the facility because of the foolproof nature of the construction, the concrete etc. Can you comment? Is there wide use of sprinklers or halon systems?

**Mr Ferguson:** Sprinkler systems are used in several places, but in some places they aren't. For example, one of the areas that is talked about is the cable spreading rooms. That concerns us and it concerns us tremendously. Part of that \$151 million, for example, is to put spray systems in our cable spreading rooms. So indeed part of that report —

**Mr O'Toole:** The recovery plan, the \$151 million, is addressing —

**Mr Ferguson:** The recovery plan is addressing all of those items in that report.

**Mr O'Toole:** I have one more question, if I may be indulged. I want you to comment on two things.

One is the 80. I get the impression from listening, without being critical, as a taxpayer, as a very normal citizen who doesn't know the high technology of this area, that we're throwing money and people at a problem. I think that is a perceived way Hydro deals with everything: throw the bucks at it. They did it at Darlington and now we're all paying for it. I want you to comment on that.

The other one is, I sat on local council when Ontario Hydro worked out a deal with the Darlington station to build a full station. They built it and manned it, and they're paying the firemen there for the next two or three years as part of this transitional agreement. There's another example of misuse of taxpayers' money, in my view. I'm not criticizing you. I'm pleased you've been very forthright. Could you comment on that? That agreement, to me, flies in the face of — here's another plan and I'm not convinced. I have no expertise, I might add, but

I'm not comfortable. That's why we're here. I'm not being unkind to you.

There are two things I'm asking here: the response agreement with the municipality, the status there, and what are the 80 people? Are they going to solve the problem or are we just going to have more people in a large, overstuffed situation?

**Mr Ferguson:** Let's start with the 80 people. As far as the 80 people are concerned, that's not just the only thing going to be done, as I think we talked about. We're looking at the complete report and we're systematically looking at the whole thing. The 80 people are just part of the fix. If you're just going to put out 80 people there and not do anything else and say, "This is going to solve our problem," because it sounds good in the papers or something, that would be the totally wrong way to go, and it's not the way we're doing it.

These are big plants and we need to allow for things like sickness and training. You have to have these people up to speed and well-trained, and in order to do that, you don't just have 80 people sitting right there at the ready all the time, you really don't. It's a total of 80 people. That accounts for vacations etc. Therefore, what you actually have on shift, 24 hours a day —

**Mr O'Toole:** Twenty.

**Mr Ferguson:** Well, more like 20.

**Mr O'Toole:** It's three shifts.

**Mr Turk:** Sixteen is what we're planning and then only 12.

**Mr Ferguson:** Okay, 16 to 20, but they're full-time. When you break it down like that, it begins to look more realistic.

As far as the municipal agreement is concerned, I can't address that. I don't know about it, especially about the Darlington agreement. I'm sorry, I'll have to get back to you on that. I literally don't know about that agreement. I know that in the United States, for example, there are agreements with municipalities, all of them near nuclear facilities, to keep them up and properly trained, because they have to be trained in some special things as far as the nuclear plant is concerned that they aren't going to get just within their own municipality. So that does take extra money and extra time.

**Mr Sean G. Conway (Renfrew North):** Mr Ferguson, you are now the vice-president of technical support at Ontario Hydro. You've held that position for what, six months?

**Mr Ferguson:** I've been a vice-president at Ontario Hydro. That particular position I've held for about four months.

**Mr Conway:** Your background prior to coming to Ontario was in the United States?

**Mr Ferguson:** Correct.

**Mr Conway:** Could you give us just a brief overview of your experience in the United States, particularly with nuclear power programs?

**Mr Ferguson:** I began in 1959 as a mechanical engineer. I started in a reactor operation and I was the reactor operator for about two or three years. Then I went

into engineering project management. We started a company, an architect engineering firm, and did consulting with commercial utilities in the United States and around the world.

1730

**Mr Conway:** So you had in that experience an opportunity to be involved with and to assess to some extent the nuclear power operations of a number of utilities in the United States and elsewhere which had nuclear power capacity, correct?

**Mr Ferguson:** Yes, sir.

**Mr Conway:** I ask that just as way of background because what I want you to tell the committee, certainly to tell me, is how would you compare the attitudes at Ontario Hydro Nuclear with respect to fire safety prior to the measures you've announced? How does the situation that the IIPA found and reported on in August 1997 compare with similar situations in, say, the United States?

**Mr Ferguson:** The situation we found was one of what we termed a lack of urgency, a lack of concern, that the risk was so low that it was not too immediate a problem.

**Mr Conway:** Was that attitude that you found in Ontario Hydro — lack of concern, low risk, not likely going to be a problem, can't happen here — qualitatively different at Ontario Hydro than, say, your experience in the United States with utilities operating nuclear power reactors?

**Mr Ferguson:** Yes, sir.

**Mr Conway:** Just as a matter of interest, why do you think Ontario Hydro's attitude was qualitatively different in that respect?

**Mr Ferguson:** I don't know the answer to that, but I attribute it to a management attitude. I know this, that we found a lot of people at what we call the SERC level and the firefighter level who had been trying for years to get this raised in the consciousness and it wasn't happening.

**Mr Conway:** How did American managers manage to get better performance, better attitudes and better results, to the best of your knowledge, on this fire protection issue?

**Mr Ferguson:** Management attention.

**Mr Conway:** What does that mean?

**Mr Ferguson:** It means putting down your plans, identifying your risk and making it happen. I realize that with the Candu design there is a difference in design basis, and there truly is a different design basis. That isn't just a lot of hand-waving. However, there is a need to have properly trained people and there is a need to respond when there's a fire. I don't care whether you have 12 fires or 34 fires and I don't care whether they're little or whether they're large, that's unacceptable. Little fires can become big fires. That kind of attitude that allows that to happen is not acceptable from a management standpoint.

**Mr Conway:** What did American managers typically employ as methodology to ensure that at the front line there was a better attitude and better performance and better results?

**Mr Ferguson:** Better management support and better training.

**Mr Conway:** You see, one of the difficulties — I'm following up here with Mr O'Toole, who, as is his wont, made the point very well. Ontario Hydro has had all kinds of good plans over a long period of time, and like Mr O'Toole I'm impressed with your plan. You appear to have, in the best Ontario Hydro tradition, a good plan, a clear plan. You're going to spend some money, by my reckoning \$176 million: \$25 million for upgraded fire protection and suppression systems, and that will give comfort to people who watched Brian Stewart on national television the other night express some real concerns about that, and then \$151 million will be spent over a three-year period or a five-year period to implement a fire safety improvement program. That's good and that's comforting.

The only difficulty is that a lot of this committee now comes from Missouri, because Ontario Hydro has had these plans before.

**Mr Ferguson:** I understand.

**Mr Conway:** We are very hopeful that under the capable new leadership, much of which appears to come from Missouri, there will be better results. I say that half facetiously but half truthfully, because the problem has been — and I think the average citizen, if he or she were sitting in this room, would say, "Another good plan." What are you going to do specifically, given the management culture problem that has been talked about by everyone from yourself to the sainted Bill Farlinger to the impressive Carl Andognini to Dr Bishop? What are you going to do to ensure that your plan doesn't come a cropper, that after you spend \$176 million and you hire all these new people, we're not going to be treated to a spectacle that somebody's going to come in here from Scottish electric in seven years' time and say, "Ferguson had good intentions but didn't take root"?

**Mr Ferguson:** A couple of things. I want to clarify that of that \$151 million, that \$25 million is included in that. That's just a clarification.

What are we going to do? Number one, Ontario Hydro Nuclear fire protection program management is my accountability, me personally. Okay? I'm building a staff and we are preparing the plans. We haven't got them all prepared yet and I appreciate the comment about, "One more flavour of the week, one more plan." You have to have a plan, though, and then you've got to work the plan. We're going to stay here to indeed make sure the plan works. We're not just another consultant flying in here, preparing a plan and then flying out and dumping it on somebody's desk. We're here to make it work. That's all I can do, is to give you my word that's what I'm going to do. I can't look into the future.

**Mr Conway:** No, and I appreciate that. You've been very candid on that. Mr Ferguson, can you tell me how many new people in the fire protection program development and implementation you expect you're going to require to successfully implement the plan?

**Mr Ferguson:** At the corporate level, we're not talking a lot of people to implement the plan because we're not going to be implementing it; we're going to be doing the



policies and the procedures and then we're going to put it out, and then we're going to get it driven down through the stations and then we're going to monitor them and make sure they're really implementing those plans.

**Mr Conway:** At the corporate level, how many people are you going to —

**Mr Ferguson:** At the corporate level, I'm looking at six or seven people at the most.

**Mr Conway:** Where are you going to get those six or seven people?

**Mr Ferguson:** Right now I have one. I have another one who is in one of my other organizations who is being brought in. We will advertise and we'll supplement with consultants, where we have to, until we get those kinds of people we need to staff the program.

**Mr Conway:** And you're willing to cast your net internationally to find the right people?

**Mr Ferguson:** Internationally, true, but I'm going to try first to get them in Canada, if at all possible, and I think that is possible.

**Mr Conway:** Your associate — I'm sorry, I was out when we began — his background?

**Mr Turk:** I am a mechanical engineer in the province of Ontario. I've spent the last 16 years working for Ontario Hydro, predominantly in the nuclear safety area. Most of my work has been on the Darlington station, but in the last four years I've been working on several projects across all of OHN.

**Mr Conway:** You're just the man I need to talk to then. Given what Mr Ferguson has so eloquently indicated as to past problems and future intentions, what do you, sir, see as the key to changing the attitudes and the performance of home-grown talent at these sites — Bruce, Pickering and Darlington — to improve their past practices which, I'll tell you, have been presented to the public — I know people don't like to hear these words, but if I heard the name Homer Simpson once on or after August 13, I heard it several times. It may be unfair, it may be unkind, but it was almost understandable, given some of what was presented on the 13th. How are we going to change those attitudes, to the extent they have to be changed, with the home-grown talent?

**Mr Turk:** I think the key to it is that you have to have a fire awareness within senior management and I think that's coming rather quickly. The education program — Mr Ferguson referred to the management education program; I forget which bullet it was in the handout — specifically addresses that point. What we're doing is looking at past fire events in nuclear facilities worldwide and industrial experience worldwide and are putting together a training program that ties the root cause of those fires back to the management failure.

**Mr Conway:** If I'm a Hydro staff person, say, out at Bruce or Pickering or Darlington, how do I know, working on the line, that things are changing? You indicated it was changing quickly. How would I know that if I'm a front-line Hydro employee at one of those stations?

**Mr Ferguson:** One way you might notice that is where that responsibility now resides in the organization at the

Bruce plant. That particular organization reports right on up now to the top of the house, where it was kind of buried down in the organization before. That's one real key one.

1740

**Mr Floyd Laughren (Nickel Belt):** Mr Ferguson, welcome to the committee. On page 10 of your submission you talk about spending \$151 million in five years: "Such a program clearly indicates Ontario Hydro's resolve to improve fire safety at our nuclear facilities." It's also, it seems to me, an indication that there's a lot of improvement needed or you wouldn't be spending —

**Mr Ferguson:** True statement.

**Mr Laughren:** Those are big bucks. I have trouble, as a layperson out there, understanding this fire issue. I don't understand whether it's simply the same kind of problem that a fire at a department store might cause, or in the Legislature itself or in a house or a factory, or whether it goes beyond that and gets into the whole nuclear area, the dangers of nuclear power. Could you help me on that because I really don't have a good picture.

**Mr Ferguson:** I'll try to do that. Number one, a lot of it is the same as in your house or in a department store. You've got so many rags or you've got so much garbage, boxes, whatever, stacked up over in a corner. That's not good fire practice. So a lot of it is exactly that.

The other part that comes into running a nuclear power station is that we have a lot of cables and a lot of those are control cables. In some cases, they're running right close together or in the same general area. You don't want a fire there because some of those control cables might be allowing you to turn on a pump to keep the water circulating in case the reactor was shut down and you need to cool it off. So those kinds of things are more related to, if you will, a high-tech industry, not necessarily nuclear per se, but it is the instrumentation and the cables.

**Mr Laughren:** I don't want to engage in any fear-mongering here, but what would be the ultimate result of a fire? For example, that CBC program to which a number of people have made reference talked about, "It's a matter of time." I think it was an expert, believe it or not, from, not Missouri but —

**Mr Conway:** Minnesota.

**Mr Laughren:** — Minnesota.

**Mr Conway:** Gerald Brown.

**Mr Laughren:** As long as he's not from Utah, I can live with it. This fellow said it's a matter of time till they have a fire they can't put out. What went through my mind was Three Mile Island or whatever; Chernobyl, I suppose. To what extent is that a potential danger, not exactly the same? I appreciate the technology is different.

**Mr Ferguson:** I understand. I think one of the keys to listening to that particular comment is if they continue down this path, which is where that report stated — that report was put out in June, issued in June. Had we continued down that path the way that was going, indeed in my opinion he was 100% correct, we would have had that big fire. We're not going down that same path. That's number one. We really aren't. We're moving the fire loadings out. We're not just making plans, we're presently

doing things. We've done a bunch of measures already. We put in fire watches. For example, if there's a person welding in a certain area we put a fire watch over here, a person who is trained in handling fire extinguishers etc to make darn sure there aren't any fires going from those sparks or whatever. We're putting in compensatory measures. If we weren't going to do that, it would be different.

**Mr Laughren:** Would there be a nuclear danger?

**Mr Ferguson:** The primary nuclear danger, which is quite honestly somewhat different here than it would be in the States with the type of reactor, would be if you caused the fuel in the reactor to not be properly cooled, and it would split open and the fission products got into the air. That would be the primary danger, no question about it.

**Mr Laughren:** The reason I'm pursuing this question is that I always thought AECB's responsibility was to make sure, on that side of it — not so much somebody falling and breaking a leg or even getting burned — that it was under their purview, the whole issue of nuclear. I don't think this latest push came from the AECB. It came from the IIPA, did it not?

**Mr Ferguson:** That's correct. Although, having said that, they had comments over the years in the fire protection area that hadn't been properly implemented, in my opinion. We made the largest push; yes, this is true, and the most concerted push.

**Mr Laughren:** Were you part of the Andognini team?

**Mr Ferguson:** Yes.

**Mr Laughren:** You came with him?

**Mr Ferguson:** Yes, I did.

**Mr Laughren:** I do find it passing strange that it was you folks who blew the whistle, if I could use that expression, on the fire problem and not the AECB. That I really do find strange.

**Mr Ferguson:** That's part of the whole IIPA. We were brought in to look at the whole program, all of the nuclear program, not just the fire protection part.

**Mr Laughren:** Right, I understand.

**Mr Ferguson:** This was just one of the many aspects of the whole nuclear program. If you want to call it "blow the whistle," we were brought in for that purpose, to evaluate the program and to make recommendations on how to make it better. That's the first part. The IIPA primarily identified the problems and then the rest of it is the get well program, if you will, or the improvement program that's coming down now to take care of those problems.

**Mr Laughren:** At the end of the day, when you've spent this \$151 million, you will have improved the situation at Ontario Hydro Nuclear beyond that which is required by AECB. Is that correct?

**Mr Ferguson:** Yes, sir.

**Mr Laughren:** Would the AECB requirements today in Ontario, or Canada, be acceptable in the United States?

**Mr Ferguson:** That's a hard — I'd like to just say yes or no. With the design they're dealing with here, it's a completely different situation. They've got different laws to begin with. What is acceptable? Usually the law defines what is acceptable and what isn't. In Canada the law is

not the same as it is in the United States. If they were to go there and say, "Is this program acceptable?" within the laws of the United States, the answer would be no; within the laws of Canada, yes, it is. That doesn't mean, just because it's within the law, that it's better or it's worse. It is minimally acceptable here. My problem is we don't want to run just minimally acceptable.

**Mr Laughren:** I appreciate that. The full-time people, I think you said 80 at each of the stations, so it's 240 positions, am I right?

**Mr Ferguson:** Approximately, yes.

**Mr Laughren:** Approximately, at Pickering, Bruce and Darlington. These are full-time positions. I have trouble in my mind, and I appreciate there are three shifts —

**Mr Ferguson:** Five.

**Mr Tulk:** Five shifts; 15 times five for a total of 80.

**Mr Laughren:** Okay, I missed that. I heard some reference to — I had trouble in my mind, despite the fact that you had these fires, picturing these people, full-time, being able to occupy their time.

**Mr Ferguson:** Everybody has that problem with every fire department all over the United States, and all over the world in fact.

**Mr Laughren:** But they have to be there and they have to be trained.

**Mr Ferguson:** Same problem; that's right.

**The Chair:** I'm going to cut us down to two minutes each because we've got to make one more round.

**Mrs Barbara Fisher (Bruce):** I will pre-empt it by saying that while you're placing your ads for your firefighters, I would hopefully like to think that you're at least doing that through the Ontario firefighters association as well. There are many well-trained people there who may have an interest in coming to the rescue of doing something. They're made-in-Ontario people. That's not meant to be a slam; it's just meant to be a compliment in terms of making sure we do it.

I want to dwell just for a minute on two things, very quickly. It's been reported that there's, let's call it, a less than palatable relationship between the Ministry of the Solicitor General and the people from Ontario Hydro who are trying to develop nuclear preparedness plans, which include fire and safety. Certainly in the place I live, that's been the case. I know from reading from Pickering that the fire chief of the Pickering community has had less than favourable comments with regard to its working relationship with Ontario Hydro.

There must be some responsibility in the end for all those bodies — the Solicitor General who oversees Ontario Hydro, and the local communities — to do a better job. Can you tell me where in the plan that's been presented so far that's been addressed and how that recovery is going to happen?

**Mr Ferguson:** A couple of things. One is we'll address that in more detail when we get into the emergency preparedness area, okay? Yes, when the fellow behind me, Art Young, first took over, we hadn't even finished the IIPA. He decided right away that the emergency prepared-



ness area needed some real attention. It was given that. One of the things we found was that the relationship with government bodies, and especially at the high level more so than down at the lower working level, was bad; it was broken, no question about it.

I think, personally, from what I've seen in the last month and a half and two months, that has really turned around. On that information you're talking about, I would ask you to go back and check your sources at the latest date now and ask again. Is it perfect? No, it's not perfect. But are we working it? Yes, we are.

**Mrs Fisher:** I think it's got to be open.

**Mr Conway:** I'm satisfied as much as I think I can be today that I've asked all my questions.

**Mr Laughren:** Very briefly, one thing that seemed to come through when we had the British in here who had privatized their nuclear industry was how they had brought along the employees of those nuclear installations there. As a matter of fact, they were shareholders of the whole operation. I was a little concerned when you were talking a couple of minutes ago about your commitment to making this work, your use of the words: "my responsibility," and, "I am here," and, "I am not going to leave with my briefcase because I'm a consultant."

**Mr Ferguson:** Good point.

**Mr Laughren:** If the culture's going to change at Hydro —

**Mr Ferguson:** Your point is extremely well taken. It's just that I feel personal responsibility to make it work, okay? There's not a way in the world I can make this work; it is a team effort. It means the employees, and not just the seven of us who came from the States either, all the Ontario Hydro people. It's going to take us all to make it work. I think we're making a lot of headway at the stations and the relationships between corporate and the stations. Your point is very well taken and shouldn't be misunderstood.

**The Chair:** Thank you very much for appearing before the committee. We appreciate both your testimony in camera and in the open session. If there are any further questions, I hope you'll be prepared to respond either in writing or come back and attend upon this committee.

**Mr Ferguson:** Very much so.

**The Chair:** You are excused; we appreciate that. It being almost 1800 hours, we will adjourn for one hour.

**Mr Conway:** The BBC World News.

**The Chair:** Mr Conway wants to watch the news. He will bring back a written report for the committee.

**Mr Conway:** You might want to check with your portfolio manager.

**The Chair:** I will do that as well. We will adjourn. We will return at 7 o'clock where we'll pick up with our deputations again continuing. It will be at 7 o'clock: a briefing, the Atomic Energy Control Board, fire and emergency response; and at 8 pm, the Ontario fire marshal's representative and the Pickering fire chief. We have these items. That will conclude the affairs of the day in terms of fire and emergency response and security. The committee will stand adjourned until 7 o'clock.

*The committee recessed from 1753 to 1902.*

## ATOMIC ENERGY CONTROL BOARD

**The Chair:** The committee will resume business, and for the next hour we will have a briefing by the Atomic Energy Control Board on the inspection process of the nuclear facilities.

**Mr Laughren:** On a point of order if I might, Mr Chair: I seek your guidance in this regard. I wrote a letter to Ontario Hydro after a morning in here during which the government members would not support writing a letter to the minister on seeking tabling of the white paper, which I think has become almost laughable, quite frankly, that we're operating in this vacuum, but so be it. That's the way the government members want it.

**Mr Conway:** Oh, there are developments.

**Mr Laughren:** I wrote a letter to the chair of Ontario Hydro asking for more information on a number of matters, because I didn't want to bring it back to the committee, knowing the response I'd get from the government members. I gave the Chair of the committee a copy of that letter. I received a response today from the chair of Ontario Hydro, indicating that he received my letter and would in due course respond to my letter, but of course the queries from the committee as a whole had to be responded to first. I don't know what those queries are, and I'd appreciate knowing that.

Secondly, if we're going to get into having the committee write letters to Hydro asking for information and separating that out from members of the committee who want to write letters, then I don't know how this committee is going to work, so I would seek your guidance in that regard.

I would have much preferred to have the committee endorse the letter that I wrote, but it seemed to me at the time that I probably would not get the support from the committee, so I'm seeking your guidance on how we can say to Hydro, "Look, when a member of this committee writes to you for information, we don't expect him or her to get the back of your hand," that it's all legitimate seeking of information, not frivolous requests. I ask that you take that under advisement at least. I'm not asking for a ruling as we sit here — I think that would be unfair — but I simply ask that you ponder on that.

**The Chair:** I will give that some consideration. While the Chair has no control over the response that we get from anyone, either formally or informally, I know that you did in fact write the letter, you did indeed circulate the letter — at least I made sure that letter was circulated to all members of the committee so we had a chance to see it. Let me reflect upon that, Mr Laughren. Your concern has been noted in Hansard and brought to my attention.

**Mr Conway:** I don't know that I ever heard one member request another to ponder in my time here.

**The Chair:** Mr Laughren and I used old-fashioned but very important language, Mr Conway —

**Mr Conway:** I'm impressed.

**The Chair:** — and we understand each other, so I will indeed ponder.

Mr Harvie, welcome back to the committee for open session. I will begin once again to indicate that you're here talking about the inspection process and also will be referring to fire and emergency response and a number of other issues that will be brought forward during your presentation to the committee. We're in your hands.

**Mr Jim Harvie:** Thank you, Mr Chairman. I'll reintroduce Robert Leblanc, the director of the power reactor division A at the Atomic Energy Control Board; Dr Barry Parsons, our senior project officer at the Pickering site; and Mrs Audrey Nowack, one of our legal counsel.

We have three brief presentations, one on inspection and licensing of the reactors, a briefing on that subject; one on fire protection and our views on that; and one on emergency preparedness. Depending on the Chairman's wishes, we can give all three presentations and then have questions or we could have presentations and then questions after each one.

Dr Parsons is going to give the first presentation on licensing and operation and inspection of nuclear power stations.

**The Chair:** Can I just point out to members of the committee that we are having copies of the slides presented for members of the committee. If you haven't got them now, they'll be here shortly.

**Dr Barry Parsons:** In the following presentation, I will first describe the AECB licensing process for a nuclear facility. After this, I will describe the main elements of our compliance inspection program for nuclear facilities.

The licensing process is the means by which the AECB gains assurance that a nuclear facility will be sited, designed, constructed, commissioned, operated and decommissioned in compliance with established safety standards and regulations.

Very early in the project, AECB staff receive a letter of intention and are closely involved in the site selection stages. Safety evaluations for each of the licensing stages are submitted by the applicant and reviewed by our staff. AECB staff maintains close surveillance over safety-related activities in each phase of the project. There are requirements on the applicant to carry out public information programs which are closely monitored by us and other agencies. In addition, it is expected that other federal, provincial and municipal legislative requirements be fulfilled; for example, environmental and emergency response. Throughout the whole process, there is a continuous review, evaluation and monitoring of analysis, operations etc by AECB staff.

I will focus my presentation tonight on the operating licence renewal process only. A nuclear facility licence is issued for a finite period, usually two years. Shorter-term licences, as short as six months, have been issued by the AECB for facilities where improvement in their operations is required. The renewal process is similar to the initial licensing, but AECB staff review concentrates on operation and design experience during the previous period.

## 1910

As part of AECB staff continuous surveillance, an annual report on station operation is presented to the board. Staff reviews and recommendations for relicensing are presented to the board as licensing board member documents, called BMDs. These BMDs are public documents. Licensing recommendations usually involve many AECB departments.

Page 4 of the handout shows a simplified sequence of events for operating licence renewal. Starting from the bottom left with a licensee application, this is sent to the AECB senior project officer at the respective site. The application is reviewed by AECB staff, along with input from specialist AECB staff located at our head office in Ottawa. Where required, input from external agencies is obtained. The review determines whether all the licensing prerequisites have been satisfied.

Once the review is completed, a board member document is prepared, which is reviewed by senior AECB management. Once approved by senior management, the board member document is submitted to the board. The process involves two board meetings, the first one being submitted for information. At the second board meeting, the board member document is submitted for a decision. The use of two board meetings allows time for public input.

We have AECB staff located full-time at each reactor site. The number of staff typically equals the number of reactors plus a senior project officer. For example, at the Pickering site office, where there are eight reactors, we have eight project officers plus a senior project officer, along with two administrative support staff.

The normal duties of the site staff are to perform inspections, which I will discuss in detail later, to review, monitor and assess the operation to verify that the station is operated as defined in the safety report and to verify compliance to the licence and the licence conditions. Project officers have free access to all parts of the nuclear station and to all staff, as well as to all drawings and reports produced by the licensee.

We have about 320 AECB staff located at our head office in Ottawa. Approximately half the staff work in areas related to power reactors. Their duties include certifying licensee staff who operate the reactors, review of licensee training programs, review of significant events that happen at the stations, review of the safety analysis and changes to the safety analysis, review of engineering reliability and risk, review of licensee quality assurance programs, review of safety of the pressure boundary of reactor components and the review of licensee radiation protection programs.

Along with our Ottawa staff, we carry out compliance inspection activities to verify that reactor operation is in compliance with the facility operating licence, including the Atomic Energy Control Act and regulations and any other applicable federal and provincial legislation.

Types of compliance inspections include: routine field inspections. These are informal area inspections of equipment and area conditions. System inspections: These



confirm the system will meet its design intent as originally licensed. Operating practice assessment: This is an activity review, such as a reactor startup or maintenance work. Quality assurance audits: These are formal audits of elements of the licensee-managed programs, such as configuration control, operator duties and maintenance. Health physics appraisals: These are formal assessments of the licensee radiation protection program. Emergency preparedness assessments: These are formal assessments of the licensee capability to respond to station emergencies. Physical security inspections: Formal inspection of the physical security measures at the station to protect it from unwanted acts and intrusions. Non-routine field inspections: These are reactive-type inspections to follow up on a station event or equipment failure.

In December 1996, the board approved a short-term licence for Pickering nuclear generation division. In recommending the short-term licence, AECB staff viewed the Pickering operation as only marginally acceptable. Over 1995 and 1996, a deterioration in safety performance at Pickering was observed, as evidenced by a number of events at the station which had operational safety significance. AECB staff believed that if the deterioration continued, it would eventually result in unsafe operation.

The AECB staff review of operation for the year 1996 concluded: "Although the risk to the workers and the public is low, major safety-related changes at Pickering are necessary," and that "the sustainability of the changes need to be demonstrated." AECB staff recognized that efforts by Ontario Hydro to improve safety performance were being initiated, but AECB staff concluded that it was too early to judge effectiveness of the actions and believed an evaluation period was required by AECB staff.

As a result, an enhanced assessment of Pickering over the period December 1996 to March 1997 was performed. This involved more than 40 AECB staff, with a total of three person-years' effort. The results of the Pickering enhanced assessment formed the basis for AECB staff's recommendation for licence renewal in June 1997. The Pickering enhanced assessment is a public document. If the committee wishes, I can briefly present the results of this assessment.

**The Chair:** Very briefly.

**Dr Parsons:** The assessment looked at eight different areas of reactor operation. They include significant event report follow-up, maintenance programs, procedural compliance — how well the organization is following procedure — radiation protection programs, self-assessment, training, surveillance testing and monitoring, and reactor safety during outages.

The overall conclusions of our enhanced assessment can be summarized as — this was in June 1997 — Pickering has recognized past poor performance; improvement in safety culture of management and staff is evident; Pickering has initiated programs to correct past poor performance; there is strong support by Pickering and corporate management; there is evidence of buy-in by staff; implementation of programs is in various stages; in some cases we question or it's too early to determine

effectiveness and sustainability; in a few cases major improvements are required, otherwise we would not expect success in either effectiveness or sustainability.

**The Chair:** What date was that, by the way?

**Dr Parsons:** This was submitted as an initial board member document to the board in May 1997.

We categorized the results of our assessment in three categories. Category 1: We viewed the results of our assessment as encouraging. Significant progress in implementation of new programs was in progress. We are optimistic that the programs will be both effective and sustainable. In that category, we included radiation protection, significant event report follow-up and nuclear safety during outages.

Category 2: These results are less encouraging. We recognize considerable effort has gone into improving performance, but unless changes are made, the sustainability and effectiveness of the program is questionable. It was too early to tell in some of these programs. The ones that fell into this category are self-assessment, training, surveillance testing and monitoring.

**1920**

The third category is where major improvements are required, otherwise we would not expect success in either effectiveness or sustainability. In that category we included the maintenance program and procedural compliance.

**Mr Harvie:** Shall we continue with fire protection?

**The Chair:** Yes.

**Mr Harvie:** Canadian nuclear power stations have been built to the national and international fire protection codes and standards that were in place at the time of their construction. As a result, there is a recognized need to upgrade their fire protection capability, especially at the older stations, to bring them up to modern standards. In particular, we have been aware of potential problems in the A stations, Pickering A and Bruce A, in the event of a fire causing evacuation of the control room, since there is no secondary control room in these plants. We have placed action on Ontario Hydro as a result of these findings. The IIPA assessment which you've been hearing about at these hearings has come to similar conclusions.

The most recent Canadian standard is called CSA — Canadian Standards Association — standard N293 and was issued in revised form in 1995. In 1996, the AECB instructed all reactor licensees to assess their fire protection capability in light of this revised standard for fire protection and to review and report on their fire protection programs as well as provide a fire hazards assessment. These assessments, which are now under way, will help determine areas where improvements can be made to bring all the stations as much as possible in line with the most recent standards. This in turn will let the AECB determine whether any regulatory action is needed.

Notwithstanding the need for improvement, the AECB is satisfied that within the context of the design characteristics of Candu plants, the existing provisions for fire protection are adequate and do not compromise nuclear safety.

The AECB requires that Candu reactors be designed to withstand fires and to shut down and maintain fuel cooling should a fire damage key components. The requirements for fire protection involve a defence-in-depth approach involving three elements: first, fire protection through control of combustible materials and sources of ignition and good housekeeping; second, fire detection and suppression; and finally, limiting or mitigating the effects of fire, which may involve fire barriers to slow down the spread of fires.

It is important to recognize that the fire protection philosophy applied to current Candu reactors is different from that used in the United States, and in particular, it does not rely to the same extent on establishing compartments with fire resistant boundaries to contain fires. As a result, comparison of specific requirements applied in the US and in Canada may not be very meaningful.

The AECB has reviewed the Ontario Hydro nuclear report on its fire protection functional inspection and we conclude that there is no new information that would require us to take immediate regulatory corrective action. The AECB generally supports the recommendations of the report. Their implementation would bring improvement to the standard of fire protection at Ontario Hydro nuclear stations in line with the AECB's instruction that improvements be made as appropriate in accordance with the revised CSA standard.

Thank you. That concludes what I wanted to say about fire protection. Mr Leblanc will add a few comments on emergency preparedness.

**Mr Robert Leblanc:** Offsite emergency planning around nuclear generating stations in Canada has become a significant issue in the past two years. This presentation will provide some background information on the role and responsibilities of the Atomic Energy Control Board in this area. I will also briefly elaborate on how emergency preparedness is integrated into the power reactor licensing process.

Depending on the magnitude and consequences of a hypothetical accident at the nuclear site, the nuclear emergency response actions could take place in two contiguous geographical areas: onsite and offsite.

The licensee, in this case Ontario Hydro, is responsible for onsite nuclear emergency planning, preparedness and response. This includes establishing linkages with agencies not on the site; for example, municipal and provincial authorities and the Atomic Energy Control Board.

The AECB reviews onsite emergency plans, programs and exercises to determine the overall capabilities of the licensees to respond to onsite emergencies. The AECB performs the reviews by determining compliance against existing licensing documentation; that is, policies, plans, procedures and training programs. As well, the AECB has developed criteria to measure emergency plans, programs and exercises, and these reviews are performed by a multidisciplinary AECB team. In addition, the AECB requires licensees to report on an annual basis the status of arrangements with authorities beyond the site boundary.

Regarding offsite nuclear emergency planning, preparedness and response, this is jurisdictionally the responsibility of the provinces, and the provinces oversee the preparedness of the municipalities. Because the offsite authorities generally do not have the full technical capabilities required to deal with the nuclear site in an emergency, they are reliant on close cooperation with the licensees.

There are actions that the operator of a nuclear power plant must do onsite to support offsite decisions, as well as activities to support the implementation of offsite actions. The licensees' responsibilities are written into the provincial nuclear emergency plans.

What is the role of the AECB in nuclear emergency planning? The AECB, as the regulator, verifies the emergency capabilities of its licensees. To do this, the AECB must be familiar not only with the licensees' preparations but with the linkages between the licensees and offsite agencies. The AECB's role during an emergency is thus to monitor the response outside, to evaluate the emergency response actions, to provide technical advice when requested, to provide regulatory approval when required and to inform the federal government and the public on its assessment of the situation as a federal regulator.

I would now like to say a few words on how offsite nuclear emergency preparedness is integrated into the power reactor licensing process.

First of all, the issuance of an operating licence is contingent on the presence of a provincially approved offsite nuclear emergency plan. In clear terms, it means that the board would probably not issue an operating licence in the absence of an approved plan. The final decision, of course, will rest with the board.

The AECB does not approve nor enforce nuclear emergency planning standards beyond the boundaries of nuclear facilities, nor does it judge the adequacy of outside nuclear emergency plans. This is done by the respective provinces, since emergency preparedness is a provincial jurisdiction.

AECB judgements of adequate operational plant safety are made independently from consideration of provincial or municipal plans for handling emergency situations. That is, no credit is taken for offsite actions in the safety analysis for the emergency phase of an accident.

As I mentioned before, the AECB requires licensees to include in their own onsite emergency plans measures that ensure communication and coordination with and support to offsite authorities during emergency situations. Information on the licensees' onsite emergency arrangements is required to be reported by the licensees. Therefore, if a licensee is not meeting its offsite obligations as outlined in its own onsite emergency plan, the AECB can take regulatory action against the licensee.

The AECB has criteria to assess the integration of the licensees' plans with the offsite nuclear emergency plans.

The AECB also supports and closely cooperates with offsite authorities in the development and maintenance of the offsite nuclear emergency preparedness capabilities.



For example, the AECB is currently assisting Emergency Measures Ontario and Ontario Hydro on the new provincial nuclear emergency plan with regard to venting strategies and public alerting.

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In closing, the AECB has relied on Emergency Measures Ontario as the competent authority to advise on the status and adequacy of the plan. The plan has been judged by Emergency Measures Ontario to be adequate. However, a number of deficiencies have been identified. Thus the plan is being rewritten as part of what is called Project Upgrade. The new provincial plan will go into service March 1, 1998, and the plan will undergo a major test at the end of April 1998 as part of the CANATEX-3 exercise.

Emergency Measures Ontario has further informed the AECB that an adequate level of preparedness is being maintained while the current plan is being revised and implemented.

**Mr Harvie:** That concludes the presentations. We are open to answer any questions the committee may have.

**The Chair:** Thank you very much. The time will go for 10 minutes per caucus. We will rotate by caucus on the questions and I will begin with the Liberal caucus.

**Mr Monte Kwinter (Wilson Heights):** In its broadest sense, the major concern of AECB is to regulate the safety of a nuclear facility. Is that correct?

**Mr Harvie:** That's correct.

**Mr Kwinter:** If you grant a six-month licence, which I assume is the minimal licence that you would — you wouldn't grant a three-month licence.

**Mr Harvie:** No.

**Mr Kwinter:** Your practice has been a six-month licence. That is the lowest category that you can get licensed in.

**Mr Harvie:** Other than zero.

**Mr Kwinter:** Well, other than zero, where you can't operate. I'm saying the lowest category you can operate at would be a six-month licence, which indicates that there are serious concerns and unless there is some improvement, there is going to be a possibility of no licence. Would that be a fair assessment?

**Mr Harvie:** Yes, that's a fair assessment.

**Mr Kwinter:** Tell me this. In your assessment, when you talked about what you had done up until March 1997, and you issued your assessment report in May 1997, I assume that up until March it was on a six-month licence. What was the result of that assessment? Was there a change in the length of the licence?

**Mr Harvie:** The six-month licence expired on June 30 and the board issued, at its meeting in June, a nine-month licence. The staff actually recommended to the board that it issue a one-year licence and the board chose to issue a nine-month licence, which expires on March 31, 1998.

**Mr Kwinter:** Is it the practice of the board to extend a six-month licence for a further six months? Has that ever happened?

**Mr Harvie:** The board has extended licences but generally for shorter periods if it's an administrative thing. I

don't think the board has ever extended a licence by six months.

**Mr Kwinter:** It's apparent that there were concerns by the board of the ability of Ontario Hydro Nuclear to really implement the assessment recommendations that you had made and they wanted to make sure that this thing didn't go too far before they had a chance to re-examine it.

**Mr Harvie:** That's correct. The board has made it very clear that it is not impressed by plans; they want to see results and they want to sustained results. The record of Ontario Hydro over the last few years is to have very good plans but, as we have discussed at another session, they have not been very successful in implementing them.

**Mr Kwinter:** A couple of weeks ago there was a CBC program that highlighted the fire danger at Pickering. Do you agree with what that report indicated? It was taken directly out of the IIPA. Do you agree with that?

**Mr Harvie:** I saw that program. I did not agree with all of it. The IIPA findings with respect to fire protection we generally agree with and they're generally consistent with what our inspections and audits and evaluations have found.

Some of the allegations on that program compared Canadian requirements with US requirements. As I tried to explain in my formal presentation, because the philosophy is different, comparing specific US and Canadian requirements is not very meaningful. A great deal was made over a particular foam substance that was used as a fire barrier in the US. Given the different philosophy, that particular material's fire resistance is of less importance in Canada than it is in the US, because of the open concept and the separation which is part of the Canadian concept, rather than the fireproof compartments, which is the US philosophy.

**Mr Kwinter:** Of the various potential hazards at a nuclear facility, how would you rank fire as a hazard? On a scale of one to 10, how would you rank the seriousness?

**Mr Harvie:** I'm not going to give you a number. It's a significant hazard. From a nuclear safety point of view, it's important to prevent a fire which can compromise nuclear safety. Given the redundancy and the fail-safe nature of the equipment in a Candu reactor and the separation of the equipment, a fire is unlikely to have a serious effect on nuclear safety. In other words, if the fire affects a shutdown system, it will affect the shutdown system by causing it to shut down the reactor, because of fail-safe.

There are heat sinks. The other thing you have to do once you've shut down the reactor is to cool the fuel, and there are redundant and separate systems for cooling the fuel at all the reactors. They are better at some than others; better at the B stations than the A stations.

A fire is a serious event, but from pretty well all the situations we have looked at, a fire is unlikely to have a serious effect on nuclear safety.

**Mr Conway:** Have you ever heard of this fellow Gerald Brown?

**Mr Harvie:** Yes. He's written to us on several occasions.

**Mr Conway:** What do you know of his professional expertise and the work he's done?

**Mr Harvie:** Not very much.

**Mr Conway:** Have you made any effort to find out whether he's on to something about fire hazards around Canadian nuclear power reactors?

**Mr Harvie:** I have not personally. Our staff have reviewed his letters. A number of letters have gone backwards and forwards between Mr Brown and our staff.

**Mr Conway:** You haven't summoned him in for a visit, to say, "We'd like to talk to you face to face about some pretty serious charges you made on national television here a couple of weeks ago"?

**Mr Harvie:** No, we have not done that.

**Mr Conway:** One of the issues that has been raised in this connection is some of the materials. In responding to my colleague Mr Kwinter you mentioned the importance or lack thereof of certain materials in the Canadian reactors. Those materials, as I understand it, are the ones that plug the holes, the conduit corridors. Can you confirm, or is there any truth to the rumour I've heard that the AECB and/or Industry Canada are currently investigating the appropriateness of the use of materials like Elastoseal and RTV silicone foam in Canadian reactor systems?

**Mr Harvie:** The AECB and Industry Canada?

**Mr Conway:** It's been put to me that there's some concern about certain brand-name products because of their fire retardance or lack thereof. Is that true? Is the AECB looking at those two materials, Elastoseal and RTV silicone foam? Just yes or no. Are you investigating?

**Mr Harvie:** Not to my knowledge. We are addressing questions of foam with Mr Brown. To my knowledge, we're not investigating any particular products. I don't claim to know 100% of what's going on in the AECB, so perhaps there is something going on that I'm not aware of.

**Mr Conway:** It's been suggested to me that there are certain products that are giving some concern about their capacity to retard fire or the spread of fire, and the two products that were mentioned to me were Elastoseal and RTV silicone foam. I'm no expert, but I'd appreciate if you could respond perhaps in writing to the Chair or the staff of the committee on those two issues.

**Mr Harvie:** Okay.

**Mr Conway:** I gather from talking to some people there was some concern identified around some of those products. It's just a rumour, that's all I know, and it may or may not be true. You're the regulator. My experience in this committee, particularly in this round, is, pay attention to all these rumours, pay attention to the flat earth crowd, because they'll generally be proven right. That's something I've said before, and I'm much more willing to pay attention to that material now than I might have been five or 15 years ago.

A final question, about fire protection again. In the reactor systems, I gather there is something called the control and power cable corridors that connect the control room with the reactor sites. They're called, what, redun-

dant safe shutdown trains? Is that the actual phraseology that's used?

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**Mr Harvie:** I don't think so.

**Mr Conway:** All right. Well, one of the questions that was put to me, and I can't resist the opportunity to ask you, is: Is there a problem with that corridor that connects the control room and the reactor, particularly for the cables and all of that material? It was suggested to me that one of the problems was that it was not properly protected on all sides for fire protection purposes. Is that anything about which you have any information?

**Mr Harvie:** There are problems identified in the IIPA with a room called the cable spreading room, which is a room that has cables that go from the control room to some of the equipment. A fire in that room, particularly at the A stations, as identified in the IIPA, could put a lot of smoke into the control room and maybe make it necessary to evacuate the control room and come back in with special equipment. That may be what you're —

**Mr Conway:** I appreciate your response. Thank you.

**The Chair:** Thank you, Mr Conway. Mr Harvie, perhaps you might take that as notice as well and provide further information for the committee along the lines of Mr Conway's request.

**Mr Harvie:** By all means.

**Mr Laughren:** I have three or four questions. One has to do with one of the slides that was shown on inspections. The one that rang a bell in my head was when it indicated that when a physical security check was being done, that was announced. It occurred to me that of all the inspections that were done — I appreciate that some you have to announce, because I can recall some of the problems in the mining industry when mining inspectors come in unannounced versus announced. But I wondered why a physical security inspection would be announced. Are they afraid somebody might get their head blown off, or —

**Dr Parsons:** If you refer to that slide, it says it's both announced and unannounced.

**Mr Laughren:** I thought the one that said "physical" —

**Dr Parsons:** Yes, "physical security inspection"; it has "announced/unannounced."

**Mr Laughren:** Oh, yes. Okay.

**Dr Parsons:** Some of them are announced, where we need the cooperation of the licensee to do it, but other times we would carry out an inspection unannounced.

**Mr Laughren:** It would be pretty easy to tighten up if you knew that —

**Dr Parsons:** It's my general finding that you could tell Ontario Hydro months ahead of time that you're doing something, and probably it's a good thing to do; then they would correct it. You'll find it's very evident that they have done so.

**Mr Harvie:** On the other hand, the fact that we have staff onsite all the time precludes the possibility that people are going to be doing different things when they're not being inspected than when they are.



**Mr Laughren:** Right. You made reference to the December 1996 issue, when the six-month licence was granted. Then in May 1997 a further approval was given for operating, right? I'm wondering to what extent that was because Andognini and his cohorts from the US were there moving and shaking at Ontario Hydro.

**Mr Harvie:** At that point in time Andognini hadn't succeeded in doing very much moving and shaking, so I don't think our decision was based on anything Andognini did. It was based on Dr Parson's and his colleagues' observations that at least in some areas things were improving. There's still a long way to go, but there was some sign of improvement.

**Mr Laughren:** It struck me that there were I think eight assessment areas you went through where there were problems. When Dr Bishop was here, one of the things she indicated was that Hydro is good at making plans but not very good at implementing them. I just wondered how you knew, when you had done an assessment and you went back and said, "It looks like things are in place to correct these," that it wouldn't be the same old story. How did you come to that in order to grant them a further licence?

**Mr Harvie:** We didn't necessarily come to that conclusion. The board only issued a nine-month licence, which is considerably short of the normal two-year period. We have decided to try to put a new condition in the licence relating to implementation of these plans. I have an action from the last board meeting to produce some proposals with respect to that by the end of this year. We have learned from our previous experience that accepting good plans from Ontario Hydro is not adequate; we have to monitor much more closely the implementation of their plans and verify that they are in fact succeeding in implementing the plans.

**Mr Laughren:** I want to turn to the fire protection issue, in which I think you indicated that you came to the conclusion that no new changes were required, that they were meeting the standards. I don't want to put words in your mouth.

**Mr Harvie:** Okay, I'll give you some better words. We came to the conclusion, on the basis of the IIPA, that there was no new information that would require us to take immediate corrective regulatory action. We have identified to you that there is a revised Canadian Standards Association standard on fire protection which not all the plants comply with at this time, particularly the older plants. We have asked Ontario Hydro to review their plants against that standard, and once we have that review, we will determine what improvements are needed to bring them up to that standard. So we have not concluded that no improvements are needed; we have concluded that there are no urgent, immediate regulatory actions required to be taken following the IIPA.

**Mr Laughren:** The reason I asked that was that we had here this afternoon Mr —

**Mr Harvie:** Ferguson?

**Mr Laughren:** Yes, Ferguson.

**Mr Conway:** Careful. You don't want to —

**Mr Laughren:** No, that was in open session, wasn't it? I don't want to mix up my open sessions and closed sessions. I'll be impeached.

**The Chair:** I'm listening very carefully.

**Mr Laughren:** Thank you. The impression I got was that AECB was not at all exercised about Hydro's fire protection ability but the crew that Mr Andognini brought in was, and as a result, not at all because of AECB but because of their own people, the Andognini group, they decided that they would go out and spend \$151 million over the next five years to improve fire protection at the nuclear plants. I found it strange that this internal group would come to that conclusion — that's a lot of money — but not because of AECB.

They also told us that a fire at a nuclear plant could indeed be a nuclear problem, not just a fire problem, and therefore it seems to me it should be on the doorstep of AECB. I don't understand how it is that AECB wouldn't be out in front on that issue rather than simply following along, "Ready, aye, ready," to the Hydro internal people. Can you help me out?

**Mr Harvie:** I think we were out in front. The new standard was issued in 1995. In September 1996, before Andognini and company entered this country —

**Mr Laughren:** This was 1997.

**Mr Harvie:** Yes. In 1996, before Andognini and company entered this country, the AECB required Ontario Hydro to review its plans against the new standard. In Pickering specifically we wrote to Ontario Hydro in 1994 — Dr Parsons can perhaps add to that — expressing concerns about fire protection. I would say that we were certainly requiring Ontario Hydro to look at what needed to be done to update the fire protection before Mr Andognini and his colleagues came into this country.

1950

**Mr Laughren:** I'm going to go back and check Hansard. I don't want to get into an argument with you, but certainly my sense was that the AECB was — I don't want to be unfair and say "content," but the AECB had not required Hydro to do anything on the fire protection, whereas Hydro internally — Mr Ferguson I guess is the gentleman's name who was the one who said, and these are my words now, not his, "We're not satisfied with what the AECB is satisfied with. We're going to spend \$151 million over five years to improve the system." That didn't come from AECB. I wonder why.

**Mr Harvie:** That decision was Ontario Hydro's decision based on the IIPA assessment, and certainly Ontario Hydro has been treating it more urgently since the IIPA assessment. But the requirement to review the fire protection of the stations against CSA N293 was placed on Ontario Hydro in September 1996, before Andognini or Ferguson were involved.

**Mr Laughren:** My final question is, do you agree that a fire in a nuclear plant is not just a fire but is potentially a nuclear problem as well? That's not what I heard you say a few minutes ago.

**Mr Harvie:** A fire in a nuclear plant is a nuclear problem if the reactor fails to shut down when it should

shut down or if the fuel, which after shut down is still producing heat, is not cooled to remove the decay heat. The fire protection is better at the newer plants, at the B stations. A shutdown's okay, as I said. It's all fail-safe, so anything the fire can do will cause the reactor to shut down.

With respect to fuel cooling, there are at the B plants well-separated systems for keeping the fuel cool. If you had a fire in one area which damaged one system for cooling the fuel, you would still have another system. The degree of separation is better at the newer stations than at the older stations. If you managed to damage all your fuel-cooling systems with a fire, then, yes, a fire would become a nuclear safety issue, but we believe that's unlikely.

**Mr Laughren:** That's why I worried about the AECB having its hands off.

**Mr Galt:** Good evening. I'm interested in the operation of the AECB. You said in Ottawa there are some 320 or 330 staff. How many are in the various plants? What kind of numbers do you have per plant?

**Mr Harvie:** We have nine professionals at Pickering.

**Mr Galt:** That's A and B combined?

**Mr Harvie:** Yes. We have five at Darlington — one of these posts is currently vacant — and we have nine at Bruce A and B.

**Mr Galt:** What other activities is the AECB involved in over and above looking after these nuclear plants?

**Mr Harvie:** We're responsible for regulating uranium mines, fuel fabrication facilities, heavy water plants, all the radioisotopes. We have several thousand users of radioisotopes in Canada who are licensed by the AECB. We're responsible for waste management. I've probably missed one or two. Fill me in, guys.

**Dr Parsons:** Accelerators.

**Mr Harvie:** Accelerators, yes; research reactors.

**Mr Galt:** There have to be some unique requirements here when you start looking at fire. It was being alluded to a few minutes ago that there was the potential of a nuclear incident once a fire starts out at one of these plants. What kind of requirements are you expecting in these plants to ensure that the fire doesn't end up creating a nuclear incident or meltdown, whatever? What are you expecting in a fire plan?

**Mr Harvie:** We're expecting fire protection systems, control of combustible materials so that fires don't happen.

**Mr Galt:** Over and above a standard plant that's going to expect all those things, what are the steps in between over and above a regular plant that may have some paper laying around or oil or whatever? You must have other expectations for a nuclear plant than just what you would have in a regular plant, because of its uniqueness. I just can't believe you'd have just basically the same needs and requirements.

**Mr Harvie:** Fire protection in principle is not any different in a nuclear plant. Perhaps you have to do it better, but you have to do the same things and perhaps do them better. That's why the various experts have got together and produced a standard which addresses fire

protection, fire detection, fire suppression and fire mitigation and all these good things you do.

**Mr Galt:** You don't have any unique requirements for the control room or any uniqueness about the coverings on wires to prevent fire from spreading or special fire walls or any of those kind of expectations in your licensing?

**Mr Harvie:** Yes, some of these things are in the standard.

**Mr Galt:** But that's standard in any one, so there's nothing extra you expect in a nuclear plant.

**Mr Harvie:** This is a nuclear standard; it's not a general fire protection —

**Mr Galt:** That's over and above standards in a regular building.

**Mr Harvie:** Yes. This is a Canadian standard on —

**Mr Galt:** That's what I'm asking.

**Mr Harvie:** Yes, and we can get you a copy of that standard if you want to read it.

**Mr Galt:** I think we should have it as a committee.

**Mr Harvie:** We'll get you a copy of that. It tells you all the things that you should do.

**Mr Galt:** That was what I was really asking about.

**Mr Harvie:** By all means.

**Mr Galt:** We were a little horrified, of course, by the media coverage the other night. As a committee, it made us sit up and take notice. Some of the questions were already asked. Do you think that what we're talking about here as a fire risk is part and parcel of the management problem that we've been told about that is present at Ontario Hydro?

**Mr Harvie:** Yes. I think, as you heard this afternoon from Mr Ferguson, there have been management problems at Ontario Hydro and these affect the management processes in the area of fire protection just as it affected other areas.

**Mr Galt:** What kind of interaction is there between the AECB, the local fire department and Ontario Hydro, particularly the nuclear? Is there any coordination among three bodies such as that when it comes to fire prevention coordination? Do they ever sit down and talk to each other? Or is it more by a piece of paper and, "This is what we're proposing"?

**Dr Parsons:** During the initial licensing of the plant, when we first give it a licence, we discuss this matter with the local fire marshal and we ensure that he is satisfied that the measures for fire protection in the plant are acceptable to him. After we do that, we don't interface with him that closely again, except perhaps working with him in an emergency drill.

**Mr Galt:** Mr Chair, I believe Mrs Johns has some questions as well.

**Mrs Helen Johns (Huron):** It's my understanding first of all that the fire marshal has a great deal of power, but it's also my understanding that he can't really move into an issue without being asked by either the atomic energy board, the minister or Ontario Hydro. Is that correct?

**Mr Harvie:** Audrey, would you like to address that one?

**Mrs Johns:** No, she wouldn't.



**Mrs Audrey Nowack:** I can't talk about the fire marshal's authority.

**Mrs Johns:** I'm talking about, can the fire marshal just walk in off the street and do something at one of these Hydro plants?

**Mrs Nowack:** Within the scope of his authority, yes. I can't describe what the scope of that authority is.

**Mrs Johns:** It's been told to us — and it could be wrong, I admit this — that the fire marshal can only become involved if they're asked by Ontario Hydro, the minister or the atomic energy board. You would disagree with that?

**Mrs Nowack:** Which minister?

**Mrs Johns:** Energy, I would assume.

2000

**Mrs Nowack:** The Ontario minister?

**Mrs Johns:** Yes.

**Mrs Nowack:** The relationship between the fire marshal and whatever minister that person is connected with I can't talk about. I don't have enough knowledge to know anything about that.

**Mrs Johns:** Can the Atomic Energy Control Board call in a fire marshal?

**Mr Harvie:** Yes, we can, certainly.

**Mrs Johns:** Have you ever called —

**Mr Harvie:** But what the legal split of jurisdiction is, you're asking the wrong person that.

**Mrs Nowack:** The AECB doesn't have any supervisory power over the Ontario fire marshal as far as I'm aware.

**Mrs Johns:** So if you recognize that there is a fire problem or it's not meeting a standard, all you can do is inform Ontario Hydro that there's a problem, you can't get someone to come in and check your work or see that there is a fire problem, or how does that work?

**Mr Harvie:** We can certainly bring in people to verify whether there's a problem, and several times in the past we have brought in people with expertise in fire, on one occasion a former fire marshal, a consulting firm. We have brought in people like that to assess fire hazards and to help us review fire exercises.

**Mrs Johns:** But never a current fire marshal, from what I'm hearing you not say?

**Mr Harvie:** Not to my knowledge. I couldn't swear to that, but not to my knowledge.

**Mrs Johns:** The other thing I wanted to ask you about was, in the CBC report the other day they had two issues that you have touched on today in some of your presentations. They suggested that not having a second control room was a substantial problem that should be looked at, and the second issue was that the fire barriers did not go all the way up to the ceiling. Have these been comments that you've been making to Ontario Hydro in the past or areas where you have expressed concern and asked them to take corrective actions?

**Mr Harvie:** There are two questions. For Bruce B, Pickering B and Darlington, there are secondary control rooms, so we're talking about the two A stations which, as it happens, will not be operating for very much longer. If

and when Ontario Hydro plans to restart them, we will obviously be addressing these questions before we permit them to be restarted. The question of the secondary control room or the ability to activate essential equipment from somewhere other than the primary control room is certainly something we have addressed with Ontario Hydro.

The question of walls not being all the way up to the ceiling is a question of this difference between the US and the Canadian approaches. The US want to put everything in a compartment and make sure the fire can't spread out of that. We have a different approach: We keep things more spread out and accessible for fire mitigation, and separate so that fire doesn't spread from one system to a redundant system. So questions such as walls going all the way up to the ceiling are part of trying to apply American standards in a Canadian philosophy.

**Mrs Johns:** I don't know a lot about the building code, but it seems to me that when you have a building and they make you put fire doors in to stop the flow, it must be an Ontario building code or something that would say there has to be some kind of boxing approach going on. For example, in any business you have where you have fire doors — for example, I can think specifically about hospitals. You have fire doors, and that boxes the fire into a smaller, compartmentalized area so that it can't spread all through the hospital.

How do you in a nuclear plant stop the fire from spreading throughout the whole building if you don't have something that compartmentalizes the fire?

**Mr Harvie:** By having processes to prevent the fire starting in the first place, to make sure fires are detected quickly and that there are people available to mitigate the effect of the fire.

**Mrs Johns:** You're obviously not doing that if you have had 34 fires in Pickering in the last year.

**Mr Harvie:** I think you heard that there were not 34 fires.

**Mrs Johns:** Well, 15 of them were false alarms, but you had 15 of them.

**Mr Harvie:** To my knowledge, none of them were allowed to spread very far, which suggests that the absence of barriers is not preventing Ontario Hydro from limiting the spread of fires.

**The Chair:** Mr Harvie, thank you very much. We have exhausted our time, and I do appreciate it.

I just have one question I might ask to pick up on a little piece of evidence that you gave just a moment or two ago. I think it was in response to Mr Conway, or maybe Mr Kwinter: the question of the eight assessment areas that were indicated earlier on the chart. This goes back over, say, the 1994-96 period when there seems to have been some sense of deterioration of standards at Ontario Hydro, and then there was the May 1997 board meeting at which consideration was given to revisiting what had been a six-month extension of a licence. There are eight assessment areas.

If memory serves me correctly, you had three categories. You had category 1, which was to be showing

signs of improvement, and so obviously you're reasonably satisfied you're moving in that direction; category 2, which, while you're showing signs of improvement, you're not there yet and it's still premature to make any decisions; and category 3, too early to tell, can't really get into that yet. Of that, if memory serves me correctly, there were three of the assessment areas in category 1, there were three in category 2, and there were two in category 3. If I am wrong on that, perhaps you can just indicate and make some fine-tuning to that.

**Dr Parsons:** You were right with regard to the numbers. There are three in category 1, three in category 2 and two in category 3, but none of these categories were as favourable as you perhaps have indicated. For example, category 3, which was the worst category, was a category where major improvements are required; otherwise, we would not expect success.

**The Chair:** To be in category 3, are you telling the committee that at that point when you had done your inspection, it was clear that Ontario Hydro had made no advances in those areas?

**Dr Parsons:** They had made some advances, but we felt they had to go a long way yet and make changes in what they were actually doing. We weren't convinced —

**The Chair:** The question I'm trying to put to you is that at least in all three categories you have seen some movement; in some areas not as much as you would wish, such as category 3?

**Dr Parsons:** That's correct. It's very minimal in category 3.

**The Chair:** I also want to make sure I'm very clear that the board gave a nine-month extension instead of the previous six-month extension. Is that correct?

**Dr Parsons:** That's correct.

**The Chair:** But I seem to recall your telling me that the staff had recommended a one-year. Is that true or not?

**Mr Harvie:** It was not an extension; it was a renewal of the licence. The staff recommended —

**The Chair:** Whatever the term is, whether it's renewal or extension or whatever it's called, there was the staff recommendation of a year, but the board had decided nine months.

**Mr Harvie:** That's correct.

**The Chair:** But the staff had recommended a year?

**Mr Harvie:** That's correct.

**The Chair:** I have nothing further. I appreciate your time. Thank you so much, and I hope you will respond to the committee if there are more written requests. There are a number of items, I know from Mr Conway's request and a number of Mr Laughren's points, that they would like to have tabled, if you would be good enough to make sure that's tabled with us.

**Mr Harvie:** We'll get you a copy of the standard.

**The Chair:** Thank you very much. We appreciate it very much.

We will turn our attention to the Ontario fire marshal and to the Pickering fire chief. If they can take their places at the witness stand, we will proceed with our final deputation of the evening.

While we're preparing for that, I remind the committee that tomorrow morning we will meet at 0900, and for the first half-hour we will be in camera. Then we will deal directly with the nuclear asset optimization plan. So we're at the very heart of the issue we're wrestling with now, the recovery plan. That will take place from 9 until 12 o'clock.

In the afternoon, Marc Eliesen will be here, and I propose that we keep it, if possible —

*Interjection.*

**The Chair:** — to either give more time to Mr Eliesen, or in fact we have more time to deal with the recovery plan. There may be a number of questions that flow out of that. We may also want to have questions of Ernst and Young. There may be a number of things focusing around that, and I would recommend to the committee we play that fairly carefully in the afternoon.

2010

## OFFICE OF THE FIRE MARSHAL

### TOWN OF PICKERING

**The Chair:** Welcome to the committee. If each of you would be good enough to identify yourself for the purposes of Hansard, and then I'm in your hands for your deputation.

**Mr Jim Coulson:** My name is Jim Coulson. I'm the manager of program coordination for the office of the fire marshal.

**Mr Joshy Kallungal:** My name is Joshy Kallungal. I'm the acting manager for research and standards, office of the fire marshal.

**Mr Rick Pearsall:** I'm Rick Pearsall, the fire chief for the town of Pickering.

**Mr Tom Quinn:** My name is Tom Quinn. I'm the general manager and CAO for the town of Pickering.

**The Chair:** Mr Coulson, are you making the initial presentation, or is the chief? How do you wish to proceed?

**Mr Coulson:** Chief, do you want to —

**The Chair:** There was no choir practice, I perceive. If there was no choir practice, then I'll direct it. Mr Coulson, if you will begin, please, and then we'll go to the chief.

**Mr Coulson:** Certainly I can begin by answering some of the questions that were asked earlier.

At this point, to the best of our knowledge, the office of the fire marshal does not have any jurisdiction in nuclear plants.

**Mrs Johns:** There you go; nobody has any.

**Mr Coulson:** However, the concern of the office of the fire marshal is public safety. Saying that, we would have concerns if the issues that were identified in the report are in fact a risk to public safety in Ontario, and we would want them addressed very quickly by those having the authority and the jurisdiction over seeing these remedied. We're quite willing to support the local fire department in those endeavours.

That's been our role traditionally in the past, to provide advice and assistance to municipal fire departments on



management of fire protection issues where the local fire department has jurisdiction and where we have the resources to support that request.

At this time we do not have any specific expertise in nuclear fire safety or fire protection. The role of our staff, as I mentioned earlier, is to provide advice and assistance to municipalities and fire departments, and that centres around fire department organization and management, training, equipment purchases, fire prevention, public education, code interpretations and code enforcement. The advice has been generally limited to conventional fire issues and not issues such as nuclear plants.

We do have staff throughout the province who provide this advice and assistance to the fire departments. I know that in the past they have provided advice at Bruce and at Darlington. While those plants were being brought on stream, there was some support from our office to the local fire service in those areas.

We also have support for our field staff and for others in code interpretations or any of the technical aspects of the fire code. That technical expertise is available through Mr Kallungal's department, where they specialize in code enforcement and technical matters in providing fire safety.

In this case, our role is mainly in support of the local fire department as they interact with nuclear plants or any other fire protection problem they face within the municipality. As an office, we have provided advice and assistance to other ministries within government, other agencies within government, and that has also been one of our roles.

I hope that clarifies some of what our role will be in this process.

**Mr Pearsall:** I'm the chief of the Town of Pickering Fire Department. I've been the chief for approximately four years, but I've been with the department for 27 years. We've worked very closely with the Pickering nuclear generating station through all the years that I've been with the department. We've assisted each other in nuclear incidents, mainly offsite, where the atomic people have come out and helped us when we've had a nuclear incident in an industrial accident or in transportation. A lot of times they've been very beneficial by bringing their monitoring equipment and bringing their expertise to help us in the environment.

The problem is that most people believe, because they see an Ontario Hydro vehicle, that it's Ontario Hydro's problem, which isn't always the case. We've had incidents on the 401 where they've come out and given us their expertise and equipment to clean up hazardous spills when the department, years ago, didn't have the availability of the equipment.

We have worked very closely with them. We cross-train, we train in CPR, first aid, pumping, rescue training, all the basics of firefighting. Some of the firefighters who are within the plant are volunteer firefighters in the neighbouring municipalities. The fire department has utilized the Wesleyville training centre with the Hydro crews, and we work one on one when we go into an emergency situation within the plant. We've dealt down

there in confined space with high-angle rescue and liquefied gases, which we deal with again in residential, but they also have on site.

In 1995, we had 19 drills with the fire crews from the Pickering nuclear generating station, and before we went into these we had a three-hour pre-training session with representatives from Hydro so we could get a feel for the environment before we went in. In 1996, we had seven fire simulations and three hazmat drills. We have also, even though we have no mandate, worked with them in working out hot work areas, when they have problems dealing with cutting, when they're doing their welding within the plant. Our fire prevention division has been very proactive with them.

We always work, as I say, one on one. When we go into the plant, we deal with a radiation protection assistant, who is a green man, as we call them. They work one on one, with one firefighter and one of these green people, so that our people are always assured they'll be properly looked after in the environment. They're also given dosimeters, which we pick up at the gate when we go in, so that we are always monitored and we have a full record of any contaminants we may have been involved with. In all the years I've been with the department, I've never known of any incidents where they've had to call us to tell us somebody has been contaminated.

The one thing I will say about dealing with the atomic plant or going into the atomic industry is that when we go there, we know what we're going into. We know we're dealing with a specific type of environment, which is basically a small city, when you look at the size of it. When we go in there, they have the equipment to monitor us going in and to tell us what we're going into, and they monitor it from the time we get there until the time we get out, which unfortunately we don't even get in private industry. We can get into the same environment either in industry or in transportation, on our highways.

We do no internal inspections of the plant proper, but we have been in the administration building, we've helped them with their evacuation plans, we've monitored their plans and we've given them advice to help them in that environment.

I don't know what else to add, other than that we work well in a one-on-one, and I have complete confidence in the people I'm dealing with.

**The Chair:** Thank you, Chief. We appreciate that evidence. Anyone else? No? Then we go to the committee. We will rotate by caucus, about 10 minutes per caucus.

**Mr Laughren:** If I could speak to the chief, I'm not from the GTA, and I'm sure you understand how inadequate that makes me feel, but it leads to the next question: What is the population of Pickering?

**Mr Pearsall:** It's 81,000 people.

**Mr Laughren:** You made reference to volunteers. Is it a volunteer fire department, with that population?

**Mr Pearsall:** Our department is a composite department. We have a population, as I say, of 81,000 people. We cover approximately 90 square miles, but most of the population is within three or four miles of Lake Ontario.

Then we get into the Brougham and Claremont area, which is part of the federal airport property. There are lots of exclusive homes up there, but a very limited population. The hamlet of Claremont may have 300 homes in it, and they have strictly a volunteer department up there, and also in Brougham it's part-time.

We do have 80 full-time firefighters. We staff three halls at all times.

**Mr Laughren:** Okay. I couldn't put it together, the volunteer, with that population.

When you do these manoeuvres, if that's the right term, with Ontario Hydro onsite, are these the full-time people who would be involved in that?

**Mr Pearsall:** We use our full-time and our volunteer staff. We train all our staff at the same level. They're trained to the standards that have been laid out by the fire marshal's office. All our staff have to go through that training, even our volunteer staff, for a minimum of approximately eight months before we allow them to go to emergency situations.

**Mr Laughren:** Are you aware that there's an emergency measures plan by Hydro?

**Mr Pearsall:** The Durham emergency medical and the emergency nuclear plan? Yes.

**Mr Laughren:** Are you satisfied that it, first of all, adequately deals with the population?

2020

**Mr Pearsall:** I really can't make comment on that. Even though I have experience in emergency planning, the plan is being rewritten, as you know, at this particular time by the provincial government. We'll see when it comes out. In Durham region we're also redoing the plan right now.

**Mr Laughren:** Do you think the population of the Pickering area, the 81,000 if you will, or make it more constricted if you wish, is aware of that emergency measures plan?

**Mr Pearsall:** There has been information distributed by Ontario Hydro to indicate that there is a plan.

**Mr Laughren:** But that doesn't necessarily mean the population is well enough aware of the plan and what to do in case of a major incident.

**Mr Pearsall:** It would be marginal.

**Mr Laughren:** I'm not trying to put you on the spot, Chief.

**Mr Pearsall:** I appreciate that.

**Mr Laughren:** You've got your job to do —

**Mr Pearsall:** I hear you.

**Mr Laughren:** — and I'm sure you do it well. I'm just trying to get at the —

**Mr Pearsall:** The basics.

**Mr Laughren:** Yes, at the whole issue of Ontario Hydro's preparedness, if you will. The other thing I was wondering is, do you know why it's being rewritten now?

**Mr Pearsall:** We just did one in Pickering in 1995, where we did a simulation. Now we're going into CANATEX next year with the Clarington plan. What they want to do is draw them so they can have a plan that's viable to both locations. So they're rewriting it. There's

also more information that has to be distributed, like evacuation etc.

**Mr Laughren:** Did you by any chance see the CBC program last week?

**Mr Pearsall:** Very briefly, yes.

**Mr Laughren:** Did it cause you some tremors?

**Mr Pearsall:** I just saw it today, actually. Not especially.

**Mr Laughren:** No? Does it ever occur to you as the fire chief — that's a very responsible position you have, I must say, I think that's an important position. I'm not trying to puff you up, but being the fire chief in a community of 81,000 people is not an insignificant responsibility.

It seems to me that if I was viewing that film, I'd be nervous about what was in there, just in terms of fire. Secondly, I'd be nervous about what it means in terms of the nuclear component of a fire. To what extent is your fire department made aware of that aspect of a fire? In other words, if the fire was severe and if it couldn't be put out and if it caused a nuclear incident, not just a fire where it burned to the ground but there was a nuclear incident, is your department aware of the dangers there and what to do about it and how to communicate with the community?

**Mr Pearsall:** We've been trained with the radiation protection groups. They've come in and they do an on-going training session with our people. I'm aware of what they consider to be their worst-case scenario.

**Mr Laughren:** I think this responsibility is largely Hydro's, as opposed to yours as the local fire chief, but do you feel that if there was a nuclear incident — and I don't want to scare anybody here — your people have the ability to get the word out to the community that this is happening?

**Mr Pearsall:** No, we do not have the ability to transmit that information to the public.

**Mr Laughren:** As this new plan is being reworked or rewritten, will that be part of that whole —

**Mr Pearsall:** That is one of the key components, the notification of the local residents within the 10-kilometre zone of the plant.

**Mr Galt:** I'll be sharing time with Mr O'Toole.

I have two conundrums, and I need the fire marshal to help me out. They're not very clear in my mind at all. Mr Coulson, if you can, number one, you said that your office does not have nuclear expertise. I've got the feeling that at the AECB they take it to a certain level, to license, and sort of stop there. Yes, they recognize the difference. I'm getting a feeling that there's a big crack that we allow nuclear activity or fires in those nuclear areas, reactors, to fall into. I'm extremely uncomfortable, as I have heard testimony this evening and previously, that there's really no one out there keeping a good check on our nuclear plants as it relates to fire. Is that right? Is that what you've told me?

**Mr Coulson:** No.

**Mr Galt:** No? Okay. I heard you say that you —

**Mr Coulson:** I'm saying that we have no jurisdiction within those plants. It hasn't been our realm to be in there



inspecting. We have no regulatory authority. We have, to the best of our knowledge, no authority to enter and inspect and enforce any codes on the property. The licensing agreement is with the AECB and not with the provincial government. All fires other than nuclear fires — certainly within our office and in the local fire department there is expertise in dealing with the typical fires that do occur. As I say, we do have expertise in that area.

It has never been, to my knowledge, presented to us to be involved in a nuclear-type fire. We've never been asked — Joshy, correct me if I'm wrong — for any expertise in that field.

**Mr Galt:** Are there other areas that you don't get involved in, such as this nuclear, in a similar sort of way, or is this one unique in itself?

**Mr Coulson:** This is unique. It's federal licensing; the licensing component doesn't fall under provincial jurisdiction. So to this point our office has had no need to be involved, and, as I say, to my knowledge were never asked to be involved.

**Mr Galt:** Airports are licensed federally. Do you not have a jurisdiction there, then, because they're not provincial?

**Mr Coulson:** No, the airports were federal as well. There was never any direct involvement by our organization either. The standards that were being developed were being developed at the federal level and not the provincial level.

**Mr Galt:** But the fire marshal's office doesn't fit in there?

**Mr Coulson:** To this point, no. Our service, as I mentioned at the start, is to municipalities. We provide advice and assistance to municipal governments, municipal fire departments, and certainly provide fire prevention advice to other government ministries, but our focus has been municipal.

**Mr Galt:** Municipal and anything that has to do with provincial, but if it's federal, it's another jurisdiction.

**Mr Coulson:** We've never been directly involved. We haven't had the authority.

**Mr Galt:** Okay. I think it's starting to make a little more sense. Thank you.

My other problem relates to Plastimet and the fire that occurred there. It is my understanding, having read some of that report, not in detail, but some of the fire marshal's report on that particular fire in Hamilton, that first it occurred because the sprinklers were requested and the fire marshal's office told them to put them in, but they didn't put them in. A fire occurred and the plant burned down. Then the report came back and basically said it was a problem of the Ministry of Environment because they didn't force the fire marshal to enforce their regulations. I find that a little difficult to follow, yet that's what I read in the report.

Do I go with the same logic if we have a fire in a nuclear plant, that the Minister of Energy may get blamed because he didn't force the fire marshal's office to enforce some regulation in one of those plants? I know it's twisted logic, but that's what I read in the Plastimet report.

**Mr Coulson:** My understanding is that they couldn't enforce this because we have no jurisdiction in this case. We have no jurisdiction, so the Ministry of Environment couldn't ask us to become directly involved until we had the jurisdiction to be in there. To the best of our understanding, and we clarified it again today, and to the best of our knowledge we don't have jurisdiction to be in there.

**Mr Galt:** In the nuclear plant.

**Mr Coulson:** In a nuclear plant. That's correct.

**Mr Galt:** My line of thinking with the Plastimet fire is that it's the Ministry of Environment's responsibility to force the fire marshal to enforce their regulations. Does that carry anywhere else in fire prevention?

**Mr Coulson:** I'll defer to Joshy on that.

**Mr Kallungal:** I guess with this fire at Plastimet, the municipality has the jurisdiction with respect to enforcing the Ontario fire code in a Plastimet-type plant. In fact, the municipality had conducted inspections and found a number of deficiencies. One of the deficiencies they noted was the installation of sprinkler systems. They were working with the owners in trying to get compliance. It's at that time the fire occurred. I just could not see how the Ministry of Environment relationship came with the fire marshal. I haven't heard that myself.

**Mr Galt:** Read the report.

**Mr Kallungal:** In fact I wrote some of the report. I just can't see that logic at all in that report. I don't see it that way.

**Mr Galt:** Thank you very much. I'm thrilled to hear your comment. I'll pass to Mr O'Toole.

#### 2030

**Mr O'Toole:** Welcome. I have a few questions. The first questions will be to the fire chief. You said you've had 19 drills. I guess the drills you have are fairly regular and pretty much at the site. At the Pickering site, is it a volunteer, kind of part-time force at the site itself?

**Mr Pearsall:** Within the plant?

**Mr O'Toole:** Within the plant, yes.

**Mr Pearsall:** Yes, I believe they are.

**Mr O'Toole:** That TV show was fairly critical. It sort of sounded like they didn't have any — are they trained to the same level as your people or a common level specifically to that particular site of possible incident?

**Mr Pearsall:** I wouldn't know the level of their training. We're trained to the fire marshal's standard.

**Mr O'Toole:** So the volunteers are not trained to the same standard?

**Mr Pearsall:** Not necessarily within the plant, no.

**Mr O'Toole:** It's my understanding that you have a very good cooperative relationship with them. Do you have a single-point contact with Ontario Hydro, Pickering?

**Mr Pearsall:** Yes, I do.

**Mr O'Toole:** So you're very familiar with the protocols. Are you called for every small incident or is there a particular point in an incident where you would be called? How does that work?

**Mr Pearsall:** We probably are very unique. We are called every time there is an alarm within the plant proper.

**Mr O'Toole:** You would send a first-tier response. There were 34 calls, according to the discussion we had with the previous group. What's your recollection of those 34 calls? Were there any fires of any significant nature in those 34 calls?

**Mr Pearsall:** No. We had approximately five electrical fires, one computer fire, one smoke-visible type of alarm.

**Mr O'Toole:** And one smoking; I think they told us that.

I'm in receipt of the emergency plan and this is a plan that's worked out in cooperation with the municipality. Is it worked out with the region?

**Mr Pearsall:** Yes.

**Mr O'Toole:** To what statutes or regulations does it conform, whose protocol? Is it the region? Is it AECB? Who actually approves the plan?

**Mr Pearsall:** I believe the provincial government is the regulator.

**Mr O'Toole:** If I may, this is fairly important. I want to establish a point here.

**The Chair:** They all are, but you have time for one more.

**Mr O'Toole:** This plan, I see, was revised September 1994. If I look at the incident report or the report we have in our possession, it showed that in 1994 they had a significant event that perhaps wasn't managed properly. Did that mean this report was written as a result of trying to upgrade some kind of emergency procedures? That was a significant event. There didn't seem to be any communication at that time through the regional chair or the mayors and other police forces. Why did that system not work? It's my understanding it didn't work in 1994.

**Mr Pearsall:** There's no connection between the two of them.

**Mr O'Toole:** It just happens to be the same time.

**The Chair:** Thank you, Mr O'Toole. That was an important question and I appreciate that. We'll move over to Mr Conway.

**Mr Conway:** What was important about that last question is it kept Ms Johns from getting on, but we'll solve that problem later.

Chief and colleagues, delighted to see you on this winter night. It's been mentioned by a few of the previous questioners that the committee has had some interest in the CBC program that ran the other night. Chief, I've got to ask you, has your phone been at all busy in the last 10 days by virtue of people calling from across Durham region wondering what, if anything, you think about the program? Have you had many calls?

**Mr Pearsall:** I've had approximately four calls: two from this gentleman and two from this one.

**Mr Conway:** A very helpful answer. So it's not something that set your phone a-ringing?

**Mr Pearsall:** Not to my knowledge.

**Mr Conway:** You're the chief.

**Mr Quinn:** If I could just add something to this, as the CAO of Pickering, we are obviously very concerned about the 30-minute CBC film. It's very important that this is impressed on you. We are the fourth-tier government system and we will be sitting down with Durham region and expecting, obviously, some sort of response back to what has been produced as a national TV production. I ended up with a copy of it today by CBC, and the chief had an opportunity to review that documentation today.

**Mr Conway:** It's not the first time we've been treated to a report about the emergency preparedness and some of the fire issues. I guess the fire issues that were raised on the CBC telecast were more pointed this time than I can recall their having been in the past. I live not far from the Chalk River area and we've had a number of concerns raised about emergency preparedness around those reactor sites, though they're much smaller, obviously, than the ones in Durham region.

I want to basically get to my one question and one concern. My colleague Mr Kwinter has some questions and I want to make sure he has an opportunity to get to them.

Throughout much of these hearings we have been told by everyone, including Hydro, that one of the problems they've had is accountability and responsibility, that it was a confused chain of command, a divided chain of command, that the buck didn't seem to stop at any particular place. One of the concerns I have on this issue of fire protection — I've listened carefully to what you've had to say today, I listened carefully to the Atomic Energy Control Board, and I'm almost a bit annoyed because this is just one of those nicely divided jurisdictions. Particularly to the fire marshal — I know you're in a tough spot — the impression I get is that it's not only divided but is almost divided so that just nobody will be fully responsible for anything, and therefore we'll have a situation where, if anything does go wrong, the Legislature and the community will spend most of their time running around in circles trying to figure out to whom the blame belongs and in what measure.

The fire marshal's office would be expected, I think by most people in the province, to have a general responsibility, accepting that there is a federal regulation of the reactor sites. I don't think that's an issue. If I lived out in Durham region or up in the Bruce or in my part of eastern Ontario where we've got a couple of research reactors, I would expect the fire marshal's office to be more involved than it appears to be. Are you planning, in the new scheme of things, Mr Fire Marshal's representative, to work towards reducing that confusion and division that seem to be there at the present time?

**Mr Coulson:** I don't know how much we can do about some of the jurisdictions there, but certainly as an office we are moving towards taking a more proactive role in seeing that public fire safety issues are dealt with. In this case, as the chief said, I did call him. In the past our office would have waited for the municipality to call us. That's the way the rules were under the previous legislation. Once Bill 84 is finally proclaimed, we will be able to take



a more proactive role. Our primary focus will be public safety, but certainly working with the local fire departments and local municipalities.

I mentioned at the start that we had done some work with Darlington, with the local fire service, trying to support them as best we could in their process, and to the best of my knowledge that went well and things are working well there. I made the approach to the fire chief with some suggestions as well that were there in the interest of public safety.

**Mr Conway:** That's all well and good. I was saying earlier today that I'm one of those people who read Mr Justice Campbell's report about the policing around that famous Homolka matter and I was then and still am furious about divided jurisdiction. It concerns me. I look at something like this and say to myself, "The fire marshal's office has a great deal of power." It's not clear to me that the fire marshal of Ontario is very anxious about exercising that power in regard to this whole issue about public safety around these nuclear power plants.

2040

My final question is, what specific measures would you recommend to the fire marshal and the Legislature as to how you might increase and enhance your activity to deal with public concerns as they arise around these issues of fire protection at or near nuclear power plants?

**Mr Coulson:** One of the areas we are following up, as we speak, and we dealt with this afternoon, is we are seeking greater clarification on our role and how we can become involved in these jurisdictions that seem to be beyond us. It certainly is the will of the fire marshal to clarify that, because he does have a genuine interest in public fire safety and he wants to be able to take action in the interest of public fire safety. We are following up on that through our legal branch. He wants clarification because he shares your same concern that the buck has to stop somewhere.

**Mr Conway:** What needs to be clarified? I've got to get to Kwinter here in a moment. I'm a citizen and I'm living in Bowmanville or in Pickering. What is it that needs to be clarified that gives you a greater comfort and authority to move forward in the public interest to provide higher levels of safety on these issues?

**Mr Coulson:** We need the legalities to be clarified so we know when we can act, and the limits of our authority once we do go on site if in fact we can go on site.

**Mr Conway:** All right.

**Mr Kwinter:** Mr Coulson, I want to pursue that area. At the present time you have no jurisdiction or authority to go into the facility on any matters dealing with fire safety. Is that correct?

**Mr Coulson:** That's our current understanding from legal today.

**Mr Kwinter:** Chief, you have no authority to go in there either. You can be invited in. You have a co-operative arrangement with Hydro where you help each other. But basically you have no authority to go in there unless you're invited in. Is that correct?

**Mr Pearsall:** That's correct.

**Mr Kwinter:** From my understanding of what we heard over the last few weeks, the AECB licences, sets the criteria, but doesn't micro-manage the facility either. We've had a record of recommendations that they have made over years. At one stage we heard that 40% of the recommendations had really been addressed, some of them outstanding as long as seven years.

We have a situation where there's really nobody who has jurisdiction over Ontario Hydro Nuclear other than them, so if they choose not to invite you in — you say that you have responded to every incident because they've informed you of that. But don't both of you feel, and you've addressed part of it, that something is wrong, that the people who are potentially creating the problem also have — there's no overseeing body that has teeth. There are all kinds of people writing reports and telling them, "You've got to do this," and putting them on short licences, but they really control their own destiny, and if they choose to ignore it, they will ignore it. Is that a fair assumption?

**Mr Pearsall:** Yes.

**Mr Kwinter:** Does that concern you?

**Mr Pearsall:** Yes.

**Mr Kwinter:** Have you made representations through the fire marshal's office, or to anybody, to see if what I think is a huge imbalance and a huge potential problem can be addressed?

**Mr Pearsall:** I thought we were getting to that through our Durham emergency measures organization, where we're trying to turn the tide back so we have more authority in an incident. On making representations to the fire marshal, no, I have not done so.

**Mr Kwinter:** What is the response of the administration of Pickering? How do they feel about this?

**Mr Quinn:** I have been with the municipality for 28 years and at the very beginning the municipality had no ownership in the plant. The plant was there in the early 1970s. We were part of the town or township of Pickering. Regional government came along and we worked through regional government. The fire chief works with the fire marshal as a governing body, and we also work through the building code and different things like that.

I think with what has happened of late, in Pickering we are very concerned. Certainly my council, members of council — the mayor of Pickering I believe is going to be doing a presentation to this committee next week — are concerned.

A number of things have happened in the last while. There is the concern about where everything lies and the credibility of what happens. A couple of minutes ago it was asked when this plan was written. This plan was written for Exercise '95, and shortly I think before that exercise or right around that time there was a major problem in the plant. All the procedures of the plant and what was worked out with Durham region: Nothing took place. That was a review that has been done and that's why a number of things have taken place since then.

But as for the administration of the town on what has unfolded over the last year or two or greater, yes, Picker-

ing is very concerned and that's why I'm here tonight. We work through the fire marshal.

**The Chair:** Thank you, Mr Kwinter. I appreciated that. Just a couple of questions. Mr Quinn, I'll just ask you: I have this document before me that is an affidavit.

**Mr Quinn:** That's right.

**The Chair:** Do you recognize that?

**Mr Quinn:** That was given to me today by one of the members of council, Councillor Brenner of Pickering.

**The Chair:** We have time for one more question, to go around. Mrs Johns is on first for a question to go around and then I'll come back. I ask you to please be very brief because of the time. I have a couple of wrap-up comments to make.

**Mrs Johns:** Speaking of this affidavit, this was actually my question —

**The Chair:** Oh, I apologize. I thought had passed to the end. Mr Laughren is first. I'm sorry. Mr Laughren, one question, please.

**Mr Laughren:** I just had one question actually, and it had to do with the point when I asked Chief Pearsall about being able to notify the community in case of a serious problem. I was left pondering whose responsibility it is to ensure the ability to do that is in place. I would have thought it was the fire marshal's office, but I'm not sure at all of that.

**Mr Pearsall:** That's being handled through the Durham emergency measures organization because they will be the key player below the province in an incident at the plant, so it would be their responsibility.

**Mr Laughren:** But if it's not in place, if it isn't satisfactory, whose responsibility is that?

**Mr Pearsall:** We're working on it presently to bring it up to a standard where we will have it.

**Mr Laughren:** So it's your responsibility?

**Mr Pearsall:** We're working on it with them, yes.

**Mr Laughren:** Okay.

**Mrs Johns:** I have a question about this affidavit, prepared by Maurice Brenner I guess. Basically it says in number two, "I reviewed the binder with Gerald Brown." Is that the famous Gerald Brown of the CBC show?

**Mr Quinn:** I believe so.

**Mrs Johns:** Could I assume from this that Mr Brenner called the CBC and that's how this show came about?

**Mr Quinn:** I don't know that. Councillor Brenner is here tonight. You could ask him that question directly.

**Mrs Johns:** I think we have a different question that we'd like to ask.

**Mr O'Toole:** Is the town of Pickering a willing host, a friendly host, with Ontario Hydro Nuclear?

**Mr Quinn:** Who are you asking that to?

**Mr O'Toole:** Whoever wishes to just answer it: you, the chief or — it's not a loaded question.

**Mr Quinn:** No, I know that.

**Mr O'Toole:** Is there some dysfunctional connection or communication?

**Mr Quinn:** Yes, there is.

**Mr O'Toole:** If you look at that particular incident, as it's been reported, 34, five of which were cigarette fires, is

this a good signal to develop an emergency plan and get wider and fuller cooperation with the support of the fire marshal, the municipality, the region, and as you say, you're the fourth tier on the leg? This show may have been a positive opportunity to bring it to light, to resolve and set up proper communication channels.

**Mr Quinn:** I think the show brought a number of things to light, a lot of things that everybody's trying to answer now. Certainly even with the 30 fires, I asked my chief that the very next day, "Did we have 30 fires?" because I don't remember 30 phone calls from this man to me. He's supposed to phone me right away and I'm supposed to be notified by Durham region nuclear awareness, and I was not.

Having a tar fire in an administration building is not a fire in the plant so that we have a nuclear catastrophe taking place, or having an ashtray or a sprinkler broken — that's not a fire, but obviously because of the nature of the facility that's in our community, the whole fire department goes down there because we never know what it's going to be like.

**Mr O'Toole:** I appreciate the indulgence of the Chair —

**The Chair:** Well, I'm not indulging much longer, Mr O'Toole.

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**Mr O'Toole:** Being from Durham region and a resident, I'm familiar with the maps and the evacuation strategies. I think that is just: Take what has happened in the past as a lesson, whether it's in 1994 or this particular bad news for Durham region. I don't think it's particularly positive news for Hydro. I think it's an opportunity for both the fire marshal and you as a municipality and the region to have some clear, connected responsibilities in the event of any emergency. I would direct that question to the chief of —

**The Chair:** No, there is no question, Mr O'Toole, but I appreciate that. A Shea is going to separate a Quinn and an O'Toole right now. We'll move on to Mr Kwinter.

**Mr Kwinter:** We've spent some time addressing safety issues. We haven't talked at all about security issues. I'm wondering if the municipality of Pickering has concerns about the security aspects of having that nuclear facility in your community.

**Mr Quinn:** Do you want to ask the chief that? No, sorry. If I think of what has happened lately, yes, we do. As 1996 and 1997 are unfolding with the plant operation, we are more concerned today than we've ever been concerned. Has security per se been a real issue? No, not up until now. I think the 30-minute program the other day has thrown a different perspective on a lot of things.

**The Chair:** Thank you very much. Just before you go, Mr Coulson, may I ask you to clarify an image that has been left in my mind? It involves jurisdictions. I recognize you are not a parliamentary individual and this is a matter of constitutional dialogue, but I have the impression at this point, according to your evidence, that you have not formal authority to enter a federal facility such as the nuclear site; you are to be invited.



**Mr Coulson:** Yes. That's our understanding at this point. We are trying to clarify that.

**The Chair:** This is nothing new, I gather; this has been an interpretation of the Ontario fire marshal's office for some years. Would that be true?

**Mr Coulson:** Would you run that by me again, please?

**The Chair:** Let me say it again. The view that you have right now of your position vis-à-vis a federal facility is no different than the view that was taken by the fire marshal, say, five years ago, 10 years ago?

**Mr Coulson:** Up until this point, no. It was deemed to be a federal property under federal jurisdiction, and unless invited, we had no right to enter.

**The Chair:** So it would be reasonable to assume that five years ago or 10 years ago, the imagery in my mind of the fire marshal standing outside the gates at a nuclear facility with a bowl of porridge, saying, "Please may I have more?" is true. It was still there; you were waiting for an invitation to go in.

**Mr Coulson:** We had no occasion to believe we should be invited in because we felt it was under the jurisdiction and licensing of another agency.

**The Chair:** The licensing being the AECB.

**Mr Coulson:** That's correct.

**The Chair:** I see. They were the ones who were supposed to have total carriage of that and you didn't concern yourself about that issue; that wasn't your area to be concerned about.

**Mr Coulson:** That's correct. We felt the fire matters fell under that jurisdiction and were being addressed.

**The Chair:** The same way you would view airports?

**Mr Coulson:** Up until recently, yes.

**The Chair:** Until the recent changes. I suppose it is even the way you would view post offices.

**Mr Coulson:** That's correct.

**The Chair:** And the way you would even view the House of Commons.

**Mr Galt:** Or federal prisons.

**Mr Coulson:** That's correct.

**The Chair:** So federal property falls under that umbrella, and the provincial jurisdiction stops at the perimeter.

**Mr Coulson:** Unless invited in, yes.

**The Chair:** Unless invited in, and you have never been invited in, to your knowledge.

**Mr Coulson:** To my knowledge, not at Pickering. I don't believe we've been invited into Pickering.

**The Chair:** So the AECB has not taken any steps over a number of years to work out any accord with the Ontario fire marshal's office.

**Mr Coulson:** Not to my knowledge. The only ones where I know there has been some involvement — we have provided advice to Ontario Hydro on some matters and certainly worked cooperatively with fire departments and Ontario Hydro in Darlington, I know for sure, and I believe there was some interaction in Bruce.

**The Chair:** I appreciate that. I think that concludes my requests, and I think that concludes the testimony. I appreciate the testimony of the witnesses this evening, and I hope that if the committee has more questions, you'll be prepared to either wait upon the committee or respond in writing, as necessary.

**Mr Coulson:** Yes, that's correct.

**The Chair:** Thank you very much for your time this evening. I appreciate your evidence very much. You may be excused.

I will remind the committee, it being almost 2100 hours — that's 9 o'clock, Mr Kwinter. I know you were working it out on your thumbs; it works better for some than for others. I will remind you that we will gather tomorrow morning at 0900, at 9 am, here in this committee room, for the first half-hour in camera, and then we will begin with the agenda of the day, which will be dealing with the very heart of the matter, and that is the recovery plan.

It being the hour, the committee stands adjourned.

*The committee adjourned at 2056.*





## CONTENTS

Monday 27 October 1997

Ontario Hydro.....	H-307
Mr Bob Ferguson	
Mr Bob Tulk	
Atomic Energy Control Board.....	H-314
Mr Jim Harvie	
Dr Barry Parsons	
Mr Robert Leblanc	
Mrs Audrey Nowack	
Office of the fire marshal; Town of Pickering .....	H-323
Mr Jim Coulson	
Mr Joshy Kallungal	
Mr Rick Pearsall	
Mr Tom Quinn	

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H-12

H-12

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**Tuesday 28 October 1997**

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**Mardi 28 octobre 1997**

**Select committee on  
Ontario Hydro nuclear affairs**

**Comité spécial des affaires  
nucléaires d'Ontario Hydro**



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## LEGISLATIVE ASSEMBLY OF ONTARIO

## ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

SELECT COMMITTEE ON  
ONTARIO HYDRO NUCLEAR AFFAIRSCOMITÉ SPÉCIAL DES AFFAIRES  
NUCLÉAIRES D'ONTARIO HYDRO

Tuesday 28 October 1997

Mardi 28 octobre 1997

*The committee met at 0950 in room 151, following a closed session.*

## ONTARIO HYDRO

**The Chair (Mr Derwyn Shea):** The committee will now rise into public session. We have completed almost an hour of in-camera meetings and briefings on the financial affairs of Ontario Hydro. We will now take it upon ourselves to receive a briefing by Ontario Hydro, if the witnesses would make their way to the table. I'd appreciate that to expedite matters. Be prepared to identify yourselves for the purposes of Hansard when we begin.

Information for the committee while we're waiting for witnesses to get to the table: Ms Clitheroe, whom we had asked to be present, is out of the province and will be returning about the noon hour. I have asked that she make herself available to attend upon this committee this afternoon. They will let us know if that is possible for her. I'll report out to the committee early this afternoon on her availability.

There are several other items of business. The most important one, if I may deal with it first, is a matter of a point of order that was raised by Mr Laughren yesterday concerning a letter he had written to Ontario Hydro seeking information, and his response to Mr Farlinger's reply, which disturbed him.

While it is not a point of order, it is certainly an issue that is worth our attention. We will recall that Mr Laughren had early on asked this committee to support his request for some information from Ontario Hydro. That was not forthcoming, but Mr Laughren, as any member of this committee may do, wrote directly to Ontario Hydro seeking that information and tabled his letter with us, so we have a copy of the request he was making. The reply we heard yesterday was to indicate that in the fullness of time there may be a response.

As I indicated yesterday in my immediate response, I have no direct authority over replies to members of this committee. I share the concern that the response was not as forthcoming as it might have been. While I could take it upon myself to send a letter to Mr Farlinger, another way would well be for the committee to decide itself if it would like to now enjoin itself in seeking that information in a more formal fashion. While I say, with regret, there is no point of order there, Mr Laughren, I do understand the issue you raise.

**Mr Doug Galt (Northumberland):** Mr Laughren yesterday made reference to the motion that was put on the floor requesting the white paper. This committee in the democratic process did not accept that particular motion, but there has been no other motion put on the floor and no indication from this committee that we would not write letters or request information from various bodies. That was sort of hinted at yesterday when in fact I don't know when this committee has refused to obtain information.

We have legal counsel and our consultant with us. In an informal sort of way any member can talk to them and reach out for information, and I would certainly encourage that. I think our legal counsel and our consultant have been very helpful in obtaining all kinds of information for us. If the information that various members of this committee require is partisan in nature, then I would encourage them to write on their own rather than coming before the committee or going to legal counsel, but certainly the informal channel is there and I would encourage that or, failing that, bring it before the committee as a motion and I'm sure the committee members individually will address it and it will go forth in a democratic process.

**The Chair:** Can I take it from your reply, then, that you are generally in agreement with the seeking of information, and either the consultants or I would just pursue that to make sure it's followed through?

**Mr Galt:** Absolutely.

**The Chair:** I'll execute that suggestion immediately, Mr Laughren. I'll see if I can get that information for you as quickly as possible. If you will make sure we draft the appropriate letter to the chairman of Ontario Hydro, we'll proceed. Thank you, Dr Galt, very much. I think that resolves the matter very quickly.

Let's proceed with the matter before us today. We are at the very heart of the hearings for this committee now. The committee proposes — I'm saying this for the purpose of the witnesses — to take significant time in its questioning and this may well not be completed in the first block of time. We may well continue, just to put you on alert in that regard.

We've agreed to deal with this in three sections, which I think you've been made aware of. That concerns the nuclear asset optimization plan, the Genco implications of the plan recommendations and then the corporate financial implications and issues. We're doing that in three parts. What I will do is you will make your presentations part by part and then we will pause and have questioning on each



of those sections. Then, concluding all of that, there will be general questions that will allow the committee to revisit any part of the presentations. Is that understood?

**Mr Rick Machon:** Yes.

**Mrs Barbara Fisher (Bruce):** Just one short question: While we're doing this, before we start into the three parts, I would just like clarification whether this is the presentation that was made to the board of directors on August 12 or is it an updated version? As a starting point, I would like to —

**The Chair:** I understand your question. That underlines some of the issues we had raised with Ms Clitheroe as well, so let me ask the question. The question being put to you is, is this in fact a reasonable echo of the presentation that was made to the board of directors of Ontario Hydro?

**Mr Machon:** Yes, it's a conglomerate of the presentation that was made to the board on the 12th, as well as an update that was made on September 9.

**Mrs Fisher:** Is it going to be obvious when we get into the updated material, separated from what was presented to the board, or is it meshed together now?

**Mr Machon:** It's actually meshed together. I can try to point it out as I go through.

**Mrs Fisher:** I think that would be very valid.

**The Chair:** All right, the request is that you do that as we proceed. Dr Galt, anything else?

**Mr Galt:** That was my point, that it's imperative we know the difference.

**The Chair:** Just to make sure we're very clear what the ground rules are as we start.

**Mr Machon:** If I don't say anything, it is the material that was presented. I'll try to index myself into anything that's been updated.

**The Chair:** Thank you. For the purposes of Hansard, would you identify yourself and your colleagues, anyone who will be witnessing, both in terms of your name and your title, and then we're in your hands for the presentation.

**Mr Pat McNeil:** Good morning. My name is Pat McNeil. I'm vice-president of corporate planning.

**Mr Machon:** My name is Rick Machon. I'm the nuclear chief operating officer.

**Ms Malen Ng:** My name is Malen Ng. I'm the vice-president of corporate finance.

**Mr Machon:** I am a member of the nuclear performance advisory group that arrived in late January with Carl. I participated in the IIPA, the safety system function inspections and the development of the nuclear asset optimization plan that was presented to the board on the 12th. I am presently accountable to Carl for the operation of the three sites in the managed system function for Ontario Hydro Nuclear.

I believe you have in front of you a copy of the presentation I'm going to walk through. I understand I have about 30 minutes on that presentation, followed by question and answer. If I revert to using acronyms, please stop me and make me say the words. It's a tendency we all have, I'm afraid.

If you turn to the first page, in an effort to gain some insight into the recent past performance of Ontario Hydro and in particular the nuclear units, we first got —

**The Chair:** Which document are you using first? We've got two documents here.

**Mr Machon:** I'm sorry, the development of the nuclear asset optimization plan.

**The Chair:** Development and recommendations?

**Mr Machon:** Yes.

When we first got here, in an effort to understand the past performance of the nuclear assets, we created a composite nuclear utility, about the same size in North America and about the same age, to take a look at how they had performed. We also picked ones that were strong performers both from the sense of competitiveness, ie bus bar costs, and credibility, how they were viewed by their stakeholders.

The graph you have in front of you is a representation of capacity factor versus time. Does everybody know what capacity factor is?

**The Chair:** Why don't you just pause and give a very quick definition.

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**Mr Machon:** A simple statement is that each power plant has a rated output. If it ran 365 days a year at that rated output, it would be a 100% capacity factor. So anything less than that, outages etc, will decrease your capacity factor.

The top line represents the performance of that benchmark utility. We don't have to go through any conversion here from Canadian to United States; this is per cent.

The bottom line represents the actual performance over that same time frame of the Ontario Hydro nuclear facilities. You can see there's a marked difference between that benchmark utility and Ontario Hydro. In fact, had Ontario Hydro operated, had we operated at that level during that same time frame, we could have produced the same energy without the Bruce A units and a couple of the Pickering units over this same time frame.

As an aside, we believe that the Candu design, properly managed and maintained, ought to achieve capacity factors in the range of 86% to 90%, just basically due to its online fuelling design and the ability to do maintenance on line. This represents the past, but what were the expectations at this same time for the future?

If you turn the page, the next two graphs, the next two pages depict the business plan budget and the business plan generation numbers respectively, that being the top line on these graphs. Based on the present trend, these expectations do not represent reality. The facts would indicate that the performance would be better represented by the line indicated as the business as usual or do nothing case, which in one case is a higher budget and lower generation.

The increased spending and energy shortfalls when compared to the expectations in the approved business plan were certain in the future regardless of any actions that were going to be taken at this point in time.

This provides a backdrop for the effort that was undertaken, and I'd like to spend the next few minutes on the IIPA and safety system functional inspection process — I'll probably revert to SSFI as I move through this — as it obviously represented a key input into the recommendations developed through the nuclear asset optimization plan.

If you turn to page 5, the objectives of this process were to diagnose and baseline the performance of key OHN departments and functions, and by that I mean, traditionally, operations, maintenance, engineering, rad protection etc; to evaluate the ability of selected safety systems and programs to function as required or as designed; to provide recommendations for problem resolution and the transition into an accountable managerial system so that we could monitor performance and develop plans in accordance with that.

The last two I just mentioned are unique to a typical process that's carried out this way. Typically, a consultant or an assessor will come in, find your problems, leave you with the problems and walk away. The uniqueness here is that we came in, found the problems, had to develop plans for those problems and move forward with the implementation of those, not just leave with the problems on the table but provide solutions to those problems, and in fact in the long term assure that performance did not slip and could be sustained as we moved forward.

The subobjective was to test and validate the completeness, accuracy and effectiveness of the current OHN nuclear recovery plan that was on the books and to develop a framework so that this could become a perennial process and we could go back and look at how we were improving over time as we moved forward.

The next page is a graphical representation of those two processes. I'm not going to go through this in a lot of detail. Suffice it to say that the IIPA — traditionally that process will take a horizontal cut across functions. With the SSFI it will take a deep vertical cut all the way to the floor through the specific procedures that are utilized to implement or cause that system to function as designed.

In addition, we looked at two problematic areas using the SSFI technique. That would be equipment qualification and fire protection. I believe you had a discussion on fire protection yesterday.

**Mr Galt:** On a point of privilege, Mr Chair: SSFI, an acronym.

**Mr Machon:** Safety system functional inspection.

**The Chair:** That's actually a point of order.

**Mr Galt:** A point of order, whatever.

**Mr Machon:** The marriage of the two processes together gives you both a sense of the breadth of the issues as well as the depth of the issues as you begin to develop the implementation plans. I can probably spend an hour talking about this one page, but I think you get a sense of the techniques we used to find the issues we needed to deal with.

The next page, page 7, represents the time line associated with this process.

On March 4 we got the detailed assessment plan approved and on the 15th we had the teams assembled. I think it's important to note that these teams were about equally split between Ontario Hydro folks and outside folks/consultants. Within the consultant ranks we used a combination of folks from the United States as well as Canadian experts. So we had a pretty good mix of people. To keep the independence part of it, somebody from Bruce could not look at Bruce. We may take the engineering manager from Bruce and use him on a team at Pickering, say, or at Darlington.

I believe you all have copies of the IIPA and SSFI specific reports in your hands.

On April 17 the phase 1 report was issued to the chief nuclear officer. This was fundamentally just a review of the documented word, what was already on the record: If you were just reading the paper, what would it tell you? That was a fairly extensive effort. There were a number of binders that kept all the history together. They were sent out to the team members and everybody submitted what they believed they were reading in the written document.

In early June we completed the verification and validation. So in the interim, we were taking the written word as a focus point, going out into the field, visiting the plants, spending normally three weeks with teams of up to 20 and 30 people, moving through the plants, looking at the systems, as well as looking at the programs that were in place.

By mid-June we had started to form the recommendations. This is where the transition into the NAOP begins to occur as we start to lay out the plans, look at the alternatives etc in that process.

On June 16 the final report was issued to Carl, the chief nuclear officer.

On July 22 to 24 — and I'll be going into a little bit of detail on this — we had the senior management strategic planning sessions where we finalized and drove out a lot of the details associated with this plan leading up to the August 12 board meeting. That was followed by the September 9 finance and audit committee follow-up meeting with regard to some more detail they wanted to see at that point in time.

This page was not part of the board presentation. Obviously there are events that have occurred since then, but the presentation to the board was included.

I'd like to spend a little time on the next page, if I could. I know it looks a little complicated or confusing, but basically it proceeds from the left-hand side to the right-hand side and back down to the middle again.

We mention the IIPA reports. That's the top block on the left-hand side. The recommendations were available by the 14th. As you undoubtedly know, there were a lot of improvement programs that were already documented and in place within Ontario Hydro. We took all those reports together and looked at the plans that were existing and in place and how they either complemented, contradicted or could be used as part of the recommendation for the IIPA reports.



The capital program, interestingly enough, was in pretty good shape from the sense of understanding the scope of — this tends to be physical work, condenser retube, those sorts of things. They were in fairly good shape and provided an integral input into the material condition issues that needed to be addressed.

There was the nuclear-line-of-business business plan which I referenced at the beginning.

There were station life-cycle studies that had been done over the last couple of years, looking at both destiny issues and near-term material condition issues, the generation forecasts, obviously, and the decommissioning studies.

We took all of these and put preliminary business cases together for each of the issues we found, disaggregated the capital program into the specific capital projects and tried to keep track of ourselves with an issues matrix so that if something was in this plan, it was captured here so we could bring some convergence, if you will, to the nuclear asset optimization plan or the scope of work that we were trying to implement. That constituted a package.

We had done some initial financial analysis on the cost side. I will speak mostly to costs, the cost of the recovery; the financial aspects I'll leave to Malen and Eleanor to deal with.

#### 1010

In some staffing analysis studies that we had done, we had Tim Martin come in and take a look. Tim Martin's an industry consultant who keeps a large database on benchmarking staffing levels within the nuclear industry and what the better performers look like. We had a point of reference there versus the staffing levels we had in our own experience in coming through that. We then sequestered ourselves for three days at Orangeville. In that meeting were not only the NPAG members, the seven of us, including Carl, who was in and out during that meeting, but we also had the site vice-presidents, the manager of operations, the manager of engineering and the manager of maintenance from each of the sites, in addition to the direct reports to Carl for the support functions in corporate.

In excruciating detail we went through each one of these plans. As you would expect, we found some overlap because operations would look at conduct of operations in a certain way and would flesh out a procedure upgrade program, and you'd see that repeated in a number of efforts, so we could begin to collapse those together and really fine-tune the program as well as begin to integrate the activities into the sequence that things had to happen. It was a very good meeting in the sense that there was a lot of pushing and shoving against each other, healthy tension I'll call it, within the room as we drove to some of the solutions that were needed.

The output of that was a list of threats, some contingencies we needed to put in place. The base case for recommendation on the options has been provided to you. More importantly, I think we achieved some substantiation of the plans we had as well as buy-in from the line organizations and ourselves and how we were going to move forward and begin to implement this. At the same time, we

finalized the Basis for Continued Operation. There were a number of questions that came up with regard to should we continue to operate given some of the things that we knew and didn't know and given some of the problems we had seen.

Do you have a copy of the Basis for Continued Operation, the document that was provided?

**The Chair:** Which document is that again?

**Mr Machon:** Basis for Continued Operation, BCO.

**The Chair:** I don't recall it offhand. Have we got it? All right.

**Mr Machon:** It outlines some very specific actions to mitigate some of the issues that were identified as shortfalls that we felt were out there that needed immediate attention in that time frame. That led to the nuclear asset optimization plan. Parallel with all of this, we were putting together a very detailed business planning process, recognizing the nuclear generation business is about generating electricity safely, reliably and economically. We're not into market studies in the business plan; we're into understanding the work we have to do in developing the plans and the improvement initiatives that feed into that.

The intention here is to sunset all these previous efforts into one consolidated business plan with a set of milestones, actions, budgets, goals, performance measures that we can now manage ourselves to into the future. Normally we're shooting for a five-year business plan in this effort. I have a copy of the process here if anybody's interested in that. It's complete with performance monitoring and the major elements that are needed.

The options we looked at and talked about in this meeting — obviously when you have 19 operating units, you could have normally 19 factorial combinations you could come up with, I believe, but we tended to look at options:

(1) Business as usual, do nothing; that'll be case 1. As I go through these, these will be the cases that were in that document.

(2) The simultaneous recovery of all 19 units, recognizing that Bruce 1 is coming out of service in late 1999 anyhow, so you could call this really an 18-unit scenario.

(3) The lay-up of the Bruce A units only, leaving Pickering running. In that one we need to recognize that the Pickering A units are going to be out of service, regardless of what we do, for the majority in 1998 anyhow due to the commitment to get the shutdown system installed.

(4) Lay-up of the Pickering A units; ie leaving the Bruce A units running. Recent, since the board meeting, is the discovery of the problems we're having with the integrity of the steam generators up there. The material condition is a lot worse than we thought at Bruce A.

(5) Lay-up of the A units temporarily with the sequential bringing back into service, which is the one we landed on as the most flexible and viable recommendation. I'll go through some of the rationale for that as we move forward.

(6) Lastly, the lay-up of the A units permanently with no intention to bring them back.

The key influencing factors in the decision process are listed on page 10. The first two involve timeliness and availability of resources. I'm going to come back to them in a little bit of detail. I'd like to talk about the last four.

The complexity and manageability of the scope: As you would expect, this is a very integrated approach. Unlike some of the programs of the past that tended to be just discrete tasks, the interrelationships between all these tasks are well defined. In implementing this, we need to make sure that the infrastructure's in place so once it is in fact implemented, we can sustain it. That requires a lot of standardization, process improvement or re-engineering — depending on how you want to look at it — and technology deployment required to undo what has been essentially done since the decentralization in 1993 in the creation of, in effect, three little nuclear business companies out there setting their own standards and building their own systems.

Of interest, the complexity does not change with regard to the number of units you attempt to recover; the complexity's going to be the same. How much you stress the system within that is directly proportional to the number of units that are attempted to be recovered or turned around. If you look in the States, you'll see that most turnarounds only involve two-unit sites. There are only three three-unit sites in the United States: Oconee, Browns Ferry where I came from before I was up here, and Palo Verde. Of those, only two are what I'd call of the same complexity, a lot of shared systems between the units. Palo Verde is a three standalone; it really could be three one-unit sites as opposed to one three-unit site.

General material condition issues from an existing standpoint: We continue to see challenges with regard to degraded piping, valve functionality, pumps and motors etc. Today there are only, I believe, 11 units running. Three of those are running at 50% at Darlington. We just got permission to go to high power level with those. That was because an analysis wasn't available for establishing a safe operating envelope. That needed to be considered in the fact that the preventive maintenance program and what we were seeing in missed call-ups was extremely high. We needed to get back into doing the preventive maintenance so we could get the reliability up to where we needed it.

The destiny material condition issues — the steam generators, the condition of those, and the pressure tubes, condensers and some unknowns with regard to the environmental qualification of the cabling at Pickering, as well as the ongoing seismic analysis, which play into what we call the destiny material condition issues: As you look at the options, which are your most viable to get back first?

The second to last category, licensing, design and configuration issues: The nuclear industry in particular requires that you be able to pull the thread, if you will, back through your design documents, your calculations, your set points, through the codes and standards to the licensing bases. That gets translated into the procedures you hand to the operators and maintainers to go out and do work in the plant. You have to be able to show the continuity between

those documents and the work that's being done in the field. The condition of those needs significant upgrade. One of the major efforts here deals with configuration management.

The last one is a set of uniform standards and expectations: You can't have one site operating to one standard and another site operating to another. The standards have to be the standards and they have to be across the system. That is one thing we learned in the States, that the standards have to be there and they have to be high and they have to be well articulated, which would discount the ability of trying to run one of the units to a different set of standards than another unit while you were trying to recover. You have to apply them equally across the units.

Returning to timeliness, with regard to the timeliness issue — there have been comments made on this — there have been numerous improvement initiatives tried over the last four to five years. My characterization would be they've been long on planning and short on execution. They tended to be, as I've mentioned, discrete tasks. There was very little integration in them. We did not achieve short-term, let alone sustainable, results as a result of those programs. In fact, our missed commitment rate to the AECB alone is in excess of 40% and we've seen shrinking terms of the operating licence. This would all beg for some sense of urgency in getting on with getting the improvement up and delivering, and getting reliability and performance to a level that should be expected and can be achieved.

#### 1020

Need to arrest the decline and show incremental improvement within a relatively reasonable period of time: I think that's about a year.

Need to put the processes in place to deal with the most certain discovery issues: I think Carl mentioned, "I don't think we've hit the bottom yet." I know that disturbs a lot of folks, but as we start to go out and try to verify, for example, that the right valve is in the right location in accordance with the design that's in place, and we walk up to it and we know we're going to find some differences, it's going to challenge operability.

If I can't show that the system is in fact operable, then I am left with some options: shutting down the plant, reducing power, taking some other mitigating actions as a result of that discovery until it gets resolved. We're going to start looking in earnest for those things, beyond the SSFI process, in the next year. I think we're going to see some significant challenges to operations, engineering and maintenance to maintain the reliability of these units.

We need to show steady progress towards the top quartile as we move. We're presently in the bottom quartile. We need to show sustained performance within, normally, a three- to four-year time frame. This again is achievable. The better plants that have accomplished a turnaround or recovery or whatever we want to call it normally take three to four years to do it. Recent examples of that would be the Brunswick facility and the South Texas project in getting there. All of this has to be accomplished, as I mentioned, while keeping the units running



safely and dealing with the challenges that are most certainly going to face us.

Page 12: I'll talk about the availability of qualified resources. The work that's been identified is extremely labour intensive. Normally about 70% of a budget is associated with labour; the other 30% is material and services. The backbone of achieving sustainability and getting your expectations out there is your training program. Our training programs require a significant upgrade in the sense of managerial training, maintenance training, technical training and operator training. I don't think there's much else left.

Once the training programs are upgraded we need to put the people through them. By that I mean whether it be a new hire, somebody who previously worked for Ontario Hydro who we're bringing back, or existing staff. It's quite time-consuming. We are estimating that it will be about 240 hours a year for probably two to three years that we're going to need to factor into our resource planning to accommodate the increased training we need.

Lack of accountability-based managed systems: By that I mean the simple act of laying out a plan, defining the deliverables, monitoring performance against that plan, establishing the expectation that the deliverable is going to occur, and developing the corrective action program once the deliverable doesn't occur, or getting the early warning signals that you're getting in trouble before you're in trouble. Those all need to be upgraded and, in some cases, put in place.

I want to re-emphasize that all this needs to be done while we're keeping the operating units running safely. Remember, we're talking in the recommendation about 12 units.

These pages with this explanation were verbally discussed with the board but weren't part of the handout. As I went through the rationale, I discussed these in the sense of the options that were considered.

When we talk about the availability of qualified resources, it's not only the issue of are there enough full-time equivalents to do the work; it's also an issue of is there the correct skill mix to do the work. Our present skill mix represents an organization that still has a heavy focus on engineering and construction versus operations and maintenance. Engineering, construction, startup and test is a fun world. Operations and maintenance tend to become one of continual refinement, process improvement; it can get boring to some folks in doing that. But the skill mix issue needs to be addressed.

To give you a sense of that, I've taken the four major categories, and when we considered the skill mix deficit for simultaneous recovery, what I've tried to show here is that when I say managerial, we have a 100% skill mix problem. If I had 100 managers, I really need 200. That's what I'm trying to represent here. You can see that we basically have a deficit in each of the areas.

The low number in operations, even though you may say that's good, remember it takes normally four years, on a good day, to get an operator to the point where he's qualified and can stand watch in a control room. Even

though that number is low, it has the longest lead time for getting somebody who can effectively do the work you want him to do. This created a shortfall of about 4,000 folks in that skill mix issue. This is the simultaneous recovery. It would be the 19, but like I said, it really is 18 by the year 1999 because Bruce 1 is out of service.

Versus the recommendation that we made, which still has some significant challenge with regard to getting the right skills in here, you can see, however, they are substantially lower: 50% managerial, 20% technical, 9% operations and 10% maintenance. In maintenance they are primarily in the control, tech and mechanical maintenance function. We have plenty of civil maintainers, in fact a surplus of civil maintainers.

This is still a challenge, to get the folks in to do this. Even though the overall numbers would show that we have just about the right number of people to accomplish it, when you factor in the skill mix, there's about a 700-person shortfall. In other words, there are 700 with the wrong skills for what we need to do and 700 that we need to find. This is mainly focused at the OM&A and the improvement projects. This does not focus at the capital projects or the traditional building trade efforts; retubing the condenser, you'd bring the EPSCA trades in to run that project for you. These numbers do not include that.

That led to our recommendation based on these inputs. One was to focus OHN's managerial, technical and trades resources on resolving the identified issues and improving performance on the B units and Darlington, and at the same time establishing the managerial and technical infrastructure to sustain that expected level of performance. Based on that performance, substantiated business cases and longer term Ontario Hydro desired generation mix, begin to recover the A units starting in the year 2000.

We chose Pickering A as the first units to come back because they have already been retubed and the work would not be extensive. It's still significant, but it wouldn't be as extensive as trying to bring the Bruce A units back. There are steam generator issues. As you know, unit 2 is already shut down and we believe that, as we put that business case together, it would make more sense, assuming we bring those back, that you bring them back with the pressure tubes redone and the steam generators replaced, for the long-term life of the plant. Of course there's a lot of work to be done on the business case and a lot of information to be pulled in in that same time frame in putting that case together.

The next page, which I believe is 15, is a representation of the cash flow. For the major efforts we've broken this up to show the 12-unit scenario: what would incrementally be spent on the Bruce units and the Pickering units in that time frame, both to get them into a lay-up state and also starting to come out the Pickering units at the end of this into the recovery.

As a reference point, the solid line is the existing business plan, so you can see the impact on the business plan. On the bottom is the yearly variance and the cumulative variance between the years 1997 and 2001.

## 1030

**Mr Laughren:** Could you spend a little more time on that chart? I guess you are familiar with it, but I haven't absorbed this. I can't absorb it. Could you describe it, please?

**The Chair:** I was assuming he was doing exactly what he had done for the board of directors, but I think that's fair enough; let's pause. Please, go ahead.

**Mr Sean G. Conway (Renfrew North):** With perhaps the same results.

**Mr Machon:** That same question led to the next slide at the September 9 meeting. I'll explain this briefly and then I'll show you where the money is allocated in the task.

The lighter area on the bottom of the graph would be the combination of OM&A and capital, ie, the total expenditures as a result of this program that would be spent on the 12 units — the two B units and Darlington — over this time frame. You notice it rises if we just look at it as the improvement initiatives are implemented, and then falls down to a sustaining base number in the year 2001. Normally, with the recovery done, you could straight-line that across or start some significant process improvements on it.

**Mr Laughren:** Are these billions?

**Mr Machon:** Millions.

**Mr Laughren:** But a thousand million is a billion.

**Mr Machon:** Yes, it's half a billion, one billion, 1.5 billion.

**Mr Laughren:** We're talking the same currency. Not Hong Kong dollars.

**Mr Machon:** No, Canadian dollars.

The darker line right above that is the cash that would be associated with the Bruce A activities over this same time frame, with the assumption you're bringing the Bruce A units back. So in 1998 you notice it decreases as we move it into a laid-up state; in 1999 it's being maintained in a laid-up state. A little bit of activity is starting in the year 2000, assuming the business case got approved, and by 2001 we're starting into the recovery of Bruce A.

On top of that, the last bar is Pickering A, again going into the lay-up and then coming out first with some expenditures starting in 1999, in accordance with an approved business case presented to the board. There are significant expenditures in the year 2000, and then it settles down into a normal base activity from that point forward. It is just meant to be how it is being spent on the units.

**Mr Laughren:** That's helpful. And the variances?

**Mr Machon:** In the variances, the solid line is the existing approved business plan on record. So this is the variance from the existing business plan or the impact on Ontario Hydro from a sense of what was in the business plan in 1997 to what we're projecting is going to happen through the out years.

**Mr Laughren:** But —

**The Chair:** I'd like him just to complete it. Otherwise everybody wants to get in. I really do understand, Mr Laughren, why you want to deal with it right now, but otherwise everybody wants to raise a number of questions.

I'd rather get back in the cycle, if you don't mind. I know it's difficult.

Please continue.

**Mr Machon:** If you turn to the next page, over the same time frame from 1997 — this presentation was not made to the board, this page. This was made subsequently at the September 9 finance and audit committee meeting. This represents where the total expenditures over that time frame are going. I tried to arrange it in a sense of the way work is done in a power plant.

The upper right-hand corner: You heard me talk about the design bases, the calculations, vendor manuals etc that are required to support the worker in the regulatory requirements. There's about \$1.1 billion that is going to be spent in this effort, reconstituting all the activities associated with that block.

In the upper left-hand corner are the managerial systems, the accountability, getting the organization's structure in place and the training program upgraded. About \$268 million is presently allocated to go into that activity.

As I mentioned, the capital projects were in fairly reasonable shape with regard to major material condition issues. About \$2 billion in capital improvements were going to be made. There's a sustaining number you would come out with at the end of this. It would normally be in the order of \$10 million to \$15 million per unit per year that you would have in sustaining capital: wear and tear, obsolescence, equipment upgrades, those sorts of things.

There's about \$5 billion in this time frame that's associated with sustaining OM&A, what you would be spending anyhow regardless of any of these efforts. This gives you a sense of where all that money is being focused as part of this effort.

In summary, page 17, I believe the NAOP provides for the most probable success path. It's still a significant challenge. I believe this is the largest undertaking of this size in North America today. A close second might be Commonwealth Edison from a nuclear standpoint, with their 12 units. We all know their past performance in trying to solve this problem.

We believe it provides for controlled decision-making regarding expenditures for older units; ie, there are milestones established in business cases that must be provided prior to bringing back the A units, to show that they are in fact economical and that they are considered against other options — an extreme amount of flexibility in bringing that back.

It arrests and improves the declining value of the newer nuclear assets. Left on the present course, I believe they would continue to degrade.

Lastly, they are the most realistic costs when compared to business as usual or the do nothing case.

That concludes the formal presentation.

**The Chair:** That brings us to the end of section 1 of three sections. What I propose to do is go to questioning in rotation by caucus. We will begin the questioning this morning with Mr Laughren.



**Mr Laughren:** I have a couple of questions that are unrelated but jumped at me as you went through your presentation.

One was, right near the beginning you talked about capacity factor on your slides — the very first slide as a matter of fact. That only goes from 1992 to 1997. If you were to back up further, what would it show?

**Mr Machon:** I have some of the original data here. In the early years, it was flipped. The Candu design was outperforming any benchmark you had. That's why I say, if they were well-maintained and managed, I believe you should be seeing 86% to 90% consistently with these designs.

**Mr Laughren:** So it was when they started to deteriorate — these are my words, not yours, but others have used this term. When preventive maintenance occurred properly, if it ever did, the capacity factor was much improved.

**Mr Machon:** Or in fact the plant was new so there was less to break because it hadn't had its wear and tear, yes.

**Mr Laughren:** Fair enough.

You also say that the work is labour-intensive. I've heard this before from folks. I'm trying to get a handle on, given the enormity of the expenditures being proposed here, how could it all be labour? I would have thought, as a layperson in this area, that the capital costs would be what drove it to these astronomical levels, but you're telling us that it's labour-intensive. What are these people going to be doing to spend these billions? Can you give us an example of what they actually do? It's huge money.

**Mr Machon:** Let me think about a couple of activities and try to take you through the process. That's probably the best way to do it.

When these plants were designed, there were obviously thousands, probably millions, of calculations that were done to support a pipe run or a cable run, a cable loading. Those all have to be revisited. We have a recent example at Pickering right now, where with the inability to retrieve a stress calculation and the fact that a modification was made which didn't integrate the additional loading associated with that modification into the stress calculation, we essentially have violated code out there.

1040

The stress limit should only go to 50% of allowable. In this case when we redid the calculation it turned out to be up over 80% of allowable. That doesn't mean it's going to break, but it means you're setting yourself up for a problem later on, and we've laid out the fix we need to do that. That's an indication that of all the modifications that have been made, we need to go back and verify that those calculations have been updated and that what's physically in the plan is represented by what's in the paper, the paper being the design documents, the calculations that support the design documents, the set points that are a result of all of that. All of that is intensive engineering labour work. It's not bricks and mortar per se; it's calculations, it's paper.

**Mr Laughren:** If I could just jump ahead now, and it reinforces that question I just asked you, on page 16, the smallest number on that page is the one that jumped off at me. You're talking about managerial systems, accountability, structure, training, human resources, labour relations that support the worker; not \$1 million, not \$2 million, not \$6 million, but \$268 million for something that is basically, as I understand it, internal organization to make the system work. Am I right?

**Mr Machon:** And the training programs. The majority of that is what's associated with the training programs, bringing those up to the level they need to be and bringing the people through them.

**Mr Laughren:** I'm just having trouble getting my mind around these numbers.

**Mr Machon:** You're talking about training up to 10,000 folks.

**Mr Laughren:** I'm just a country boy from the north so I have trouble with the size of these numbers, you understand.

**Mr Machon:** I'm just a country boy from the south.

**Mr Laughren:** When this report was presented to the board on August 12, did you get a lot of piercing questions?

**Mr Machon:** Through the whole presentation we did, yes. I'm trying to remember. I think it was in the order of three to four hours long. I briefly took you through the overview of the process, but we spent more time in the process, a lot of time in the findings area and then time through this portion of the presentation. Yes, there were a lot of questions similar to what you're asking: Why only this year? Why that year? What is the scope of the work?

I have actual lists of the capital projects, lists of the initiatives and the estimates that were done for them. That led to coming back to September 9 to the audit and finance committee with another level of detail in the presentation.

**Mr Laughren:** Were you part of the presentation that day on the 12th?

**Mr Machon:** Yes, I did this portion of the presentation.

**Mr Laughren:** Some of us have trouble envisioning this meeting taking place in one day and coming to the decisions that were made on that one day. I still can't get that through my head, that you accomplished that, unless the fix was in before the meeting started. I'm wondering to what extent there was pressure on you or others to make this happen that day, to get a decision that day.

**Mr Machon:** There wasn't any. We provided all the backup material about a week before and went through the presentation. We didn't apply any pressure to reach a decision, nor was any pressure applied to us to force a decision.

**Mr Laughren:** Were you surprised at the speed with which this major proposal was accepted by the board?

**Mr Machon:** I think the direction is sound so I wasn't surprised by it. As I said, the plan is flexible and what we were essentially released to do was to move forward over the remainder of 1997 and drive this into the business

planning process. That, the business plan, is what's going to be presented normally in December.

**Mr Laughren:** But it was only flexible in terms of it being a nuclear option. It was not flexible in terms of other options, was it?

**Mr Machon:** Our charge was to come up with a recommendation for the nuclear asset, which is what we did. From a generation standpoint, I go back. Don't forget that the Pickering A units were going to be out of service for the majority of 1998 anyhow, and those are the first ones we bring back. From a generation impact, number one, we believe we had mitigated what was going to happen regardless of the decision; number two, we purposely held the Bruce A units on through the first quarter to get through the winter peak, to help alleviate that portion, allowing the fossil units to get themselves refurbished and to be able to pick up some of the base load in the future. From that standpoint, we factored some of that in, but this information was obviously shared with the generation folks as well.

**Mr Laughren:** It's always easy to second-guess. I appreciate that; I wasn't there. But I would like to think that if I'd been on the Hydro board, which is highly unlikely, I would have said to you and your cohorts: "Wait a minute. What are the other options we could be looking at here as opposed to this one?" Did that question come up?

**Mr Machon:** As I walked through the options, and I think I did here, there are actually any combination of the 19 units that you could come up with for options.

**Mr Laughren:** No.

**Mr Machon:** You're talking outside of nuclear?

**Mr Laughren:** Yes.

**Mr Machon:** They weren't asked of me because I was dealing with the recommendation as it pertained to nuclear only.

**Mr Laughren:** It seems to me that's the question the broader public is going to be asking, not which of the units and so forth, because they'll stand back and say, "You folks know which units should be shut down and which should not and which need to be retubed and so on, what training is required and so forth." I can see the world out there, the owners of Hydro, saying, "You know best that way, but do you know best in terms of what the real options should be, and should we be looking only at one option?" That's what's bothering me as a shareholder in Ontario Hydro. I just don't know the answer.

**Mr Machon:** Again, our charge was to come up with a recommendation for the nuclear asset.

**Mr Galt:** I notice the schedule you people went through. As I recall, we've had board members here saying this was dropped on them on the Thursday, I believe, prior to the August 12 meeting. Were you keeping this secret, or when did you provide any information for the board? It's hard for me to believe you had a retreat to Orangeville on the 22nd or 24th without the board being aware of it. I'm surprised some of the board members are telling us they knew nothing until the Thursday prior to the board meeting.

**Mr Machon:** You'll need to confirm this with Carl, but I believe Carl was briefing the board as part of the routine on where we were in the process, and I also believe he was briefing the executive committee. But you need to ask Carl that question. I didn't do any of that with the board.

**Mr Galt:** From your comments, I believe I do remember him hinting to that but I don't remember any particular time frame, but that isn't what I recall from board members when they presented to us. We'll pursue that later.

**Mr Machon:** The briefing could have been just on nuclear performance as well, how the units were doing.

**Mr Galt:** Rather than the complete.

I'm concerned on the whole area of management and the rest of my questions will be in that general area. On what I'm hearing from you this morning, I'm rather disappointed. We're talking about the old status quo. The pre-Strong era is basically what I heard you telling us you would like to go to. I'm not hearing real accountability and I'm rather disappointed there.

We're told, and it's repeated over and over again in the IIPA report, that we have a management problem; 80%, I think it says in there, relates to management. We've had various chairs of Ontario Hydro talk about nuclear culture and cults and all the rest of the nasty things, but very little in here is talking about turning this around. The problem starts at the top. I'm wondering how many vice-presidents and executive vice-presidents are planned to be laid off because of this problem.

**Mr Machon:** I can't go back to the past, but I know that everybody surrounding me up there, save one or two, is new since I came here. I believe those actions have already been taken within nuclear.

**Mr Galt:** When did you come here?

**Mr Machon:** January.

**Mr Galt:** You're from the States?

**Mr Machon:** Yes.

**Mr Galt:** Do you have a work permit to be working here?

**Mr Machon:** Yes, I do.

**Mr Galt:** Do all the other Americans working here have work permits?

**Mr Machon:** I can only speak to the ones who went back to get the work permit with me.

**Mr Conway:** They're all illegal aliens.

**Mr Galt:** Some were working here, I'm hearing you say, and then had to go back and get work permits?

**Mr Machon:** No, we came in with work permits.

**Mr Galt:** Okay. Thank you.

Management being the problem — we've been told this over and over again — what kind of training programs are you going to put in place to upgrade management so we don't have this problem in the future?

**Mr Machon:** That's in the block on the upper left-hand side. As I talked through this, I talked a lot about accountable managerial systems. Getting those in place is a key to sustaining performance. I believe it is addressed in the plan. Specifically, we are moving aggressively forward with the requisite organization principles and the



training associated with that, which is highly focused towards accountability: the who? by what? by when? concept. The fact that we have created integrated plans with deliverables, with milestones, with names, with accountabilities is key to the success of this overall program. I believe it's integral to this; it's covered in it.

1050

**Mr Galt:** I'm following that, but there seemed to be in the past a total commitment to the program. Andognini talked about, "It would improve by an authoritative management style." As I read the report, the problem is it's too authoritative. That's a message I'm getting loud and clear. You can't get messages coming up through. That's an authoritative management style that's stopping those messages. They're scared to take the message up because the messenger may get injured rather than the real problem. How do we turn that around in these programs?

**Mr Machon:** One of the keys to any turnaround program — I've been involved in a couple — is exactly what you're talking about. You don't shoot the messenger. You can have both: We're authoritative or we want to be authoritative in the sense that we move to the decision-making process probably a little quicker maybe than folks are used to, with some buy-in. However, the reward is actually for identifying the problem. The problem identification of corrective action systems that are being put in place encourages self-identification. It is only through self-identification that you get to the precursors before you have something significant happen at the lower levels.

That's a reason to think, when you look at performance indicators, one of the classic performance indicators is, how many corrective action documents do you have outstanding at any point in time? The number is not important. In fact there are some cases that would say the higher the number the better, because more people are out there identifying problems: procedures that aren't working, equipment that's leaking.

As I raise the threshold for an expectation of an operator taking a tour, for example, an operator today may walk right by a small drip coming out of an oil system. It's not a big deal; we wipe it off with a rag and he'll move forward. That's not my expectation; that's not the expectation and standard we need to have. What we need to have is, not only does he wipe it off but he enters that leak into the corrective action program, so it becomes part of the work system to fix it. That's what we're encouraging. That's an attitude.

**Mr Galt:** We've been told, I think by Andognini, that we're overengineered and undermanaged. How many engineers will you be getting rid of?

**Mr Machon:** How many engineers would we get focused on doing the right thing?

**Mr Galt:** No. He said we're overengineered, we had too many. How many are we getting rid of?

**Mr Machon:** "Engineered" and "engineers" are two different things. We need engineers in the sense of, who else is going to do the calculation? Who else is going to do the verification that the vendor manual reflects the pieces and parts you have out in the plant? That's an engineer.

The overengineered means that I have created too many options for the operator in the sense of the systems and I continually try to modify it.

Things only break for three reasons in a power plant: I'm not operating it right; I'm not maintaining it right; or it never could have in the first place, ie it wasn't engineered right.

**Mr Galt:** The people representing engineers, the society, were here the other day telling us the status quo was great and full steam ahead. I didn't get any indication that they had any idea of something new and different. At least the Power Workers did bring in a suggestion that was different. But the society was, "The status quo is just great." The status quo is not satisfactory.

Changing direction a wee bit, private companies have downsized. They found they had to. They've flat-lined management to handle competition. What's Ontario Hydro going to do in a similar vein to be ready for competition to head into that? It's happening all over the world, not just in Ontario or Canada. It's certainly happening in the US. What are we doing about flat-lining this management problem we have at Ontario Hydro?

**Mr Machon:** The first thing you need to do is get the performance to where it should be.

**Mr Galt:** That isn't how private industry did it. They flat-lined it and then got the performance.

**Mr Machon:** What kind of performance are we talking about here?

**Mr Galt:** Bottom line.

**Mr Machon:** I'm talking nuclear safety.

**Mr Galt:** We're talking safety, too, and bottom line.

**Mr Machon:** I understand because I took an organization from 1,600 people to 1,200 people over a two-and-a-half-year time frame. Performance went up at the same time. But I started with an asset that was reliable. We need to get the asset reliable first. Even when you look at these costs on the asset, the Candu design is extremely competitive today. It's in the top quartile. Some of that may be accounting magic and how much we capitalize and how much we put in OM&A, but it is in the top quartile. Competitiveness is not the issue with the Candu design. Getting the performance back up will make it more competitive. I believe the numbers will bear that out.

That's why I alluded to some of the process. We have a lot of processes — how I process a work order — that are very convoluted. They require a lot of folks to do it. As a priority, we're attacking and simplifying them at the same time. In the end, as the asset value comes up and the performance comes up, you overlay that with the process improvements. You'll settle out at a lower base than you would have had you just kept moving forward.

**Mr Galt:** Many other jurisdictions have gone to outsourcing. Your page 17, I think it was, had significant numbers of increased, or lack of numbers of personnel. For example, GM and a lot of other organizations have gone to outsourcing. Have you considered this? If so, by how much? How will you implement that rather than everything in-house? That's been one of the problems in the past at Ontario Hydro.

**Mr Machon:** Yes. This plan does not assume everything's in-house. In the period between August 12 and now, what we've been doing is beginning to package some of this work as best we can to put it out for competitive bid to allow companies to bid on the work. What that requires is that we need to understand the deliverable, we need to understand the time frame for all of that — scope fundamentally — and then put the packages out for competitive bid, outsource it, whether it be Canatom or GE or whoever, to bid on these packages for us.

**Mr Monte Kwinter (Wilson Heights):** I want to talk about the options, not the options that are non-nuclear, just within the nuclear option. It seems to me you have stated that traditionally Ontario Hydro Nuclear has been long on planning and short on execution. You've also identified that there's a mismatch in skills. You also said they're not operating right, they're not maintaining it right, but that the Candu technology is and can be very competitive. It seems that what we're talking about is a people issue, which is your number one problem. Is that a fair representation?

1100

**Mr Machon:** It's the majority. We can talk about 75-25, we can talk about 80-20, but it's certainly greater than 50-50.

**Mr Kwinter:** My point is this: When you shut down the reactors, that period of time is going to be used to improve the facility, the hardware, which is relatively minor compared to the other issues, which are your personnel, training, maintenance, management, all of those areas. First of all, we've been told that the facilities are safe, that if they continue in their poor maintenance and poor management, they may become unsafe. But at the present time, everyone who has appeared before us, who is in a position to say, says it's a safe facility. The productivity is not great compared to what it could be, but it's turning out power. Right now we haven't had any brown-outs; it's functioning.

It would seem to me that if you are going the nuclear option, one of the things you could do is say: "We've identified the problem. Our team has come in. We've now got a handle on what the problem is. Our number one goal is, let's get the right match of skills, let's get the training up, let's get the management up and then as we get that and we have people who we know at least can operate the function in a very highly productive way, then let's work out some phasing process to upgrade the hardware."

It seems, as an outsider and as someone who has some involvement in business, that a lot of the money that is being directed to this problem is going for replacement energy, when to me I don't understand why you need that replacement energy when you've got the capability now. It's safe — it's not productive but it is safe — and your major problem is training maintenance personnel. It seems you would concentrate your efforts on that while still maintaining the facility and then gradually work it out and do your refitting, whatever it takes over a period of time, which would save you a pile of money, which would not create all of the other problems that you have with

replacement energy and what it does to the environment, and which would address the major concern everybody has identified: There's lousy management, lousy maintenance and no one seems to care about it. Do you have any reaction to that?

**Mr Machon:** Is that a statement or a question?

**Mr Kwinter:** It was a statement, but I'm asking you the question: Is that not true?

**Mr Machon:** If you go back to the first slide I put up, even if we stabilized for a while and undertook some of these programs right now — we have been operating without Bruce A. If we get the units up to where they should be, which I believe on the B units we can in a relatively quick period of time, then you will have the same amount of generation we have had even with all 19 units trying to operate. Since over the summer period, I honestly am having a hard time remembering when we had more than 12 units operation anyhow, at any one point in time.

What I would offer is, in the present condition of the plants it would be extremely difficult to achieve the generation; ie, the generation deficit is going to be there in some order of magnitude regardless of whether we try to do 12 or 19. I think your best, most realistic shot at getting that performance restored and getting the generation up to where it should be will come out of the 12 units. They also happen to be the bigger units. You're talking 900 megawatts and 800 megawatts versus the 500-megawatt units at Pickering, nominally.

**Mr Conway:** Mr Machon, I want to come back to the table that Mr Laughren was discussing with you earlier and that's the table on page 15, "Phased Cost Forecast." I found your responses to Mr Laughren earlier quite helpful. There was just one item I was not clear about, and I'd like you to explain the two bottom lines: yearly variance and BP cumulative variance. First of all, what is BP cumulative variance? What does that mean?

**Mr Machon:** Business plan. We needed an anchor somewhere when we were doing the analysis and we chose to anchor ourselves in the existing, approved Ontario Hydro Nuclear business plan.

**Mr Conway:** Thank you. Now if I look at those vertical lines, I think I certainly understood what you were saying to Mr Laughren. So let's now take the year 1998, just so that I'm clear I understand what the bottom lines are: The yearly variance, \$338 million, correct?

**Mr Machon:** Correct.

**Mr Conway:** What do I understand that yearly variance to mean? Is that going to mean that under the NAOP you will expend \$338 million beyond what the business plan had called for?

**Mr Machon:** Correct.

**Mr Conway:** Now, what's the \$529 million?

**Mr Machon:** It's \$328 million plus \$191 million. It's just a cumulative total.

**Mr Conway:** It's cumulative. All right. So when we get to the year 2001, the \$414 million is the in-year variance and the bottom \$1,710 million is the rolling total.

**Mr Machon:** Correct.



**Mr Conway:** Thank you very much. Now I want to go to questions around personnel because I was quite struck by — and now I would be looking at page 13 — what you said earlier about earlier plans, that the intentions were good but the Ontario Hydro Nuclear plans for recovery and improvement were long on planning, short on implementation. You said, and your charts on page 13 make pretty plain, that it's going to be a labour-intensive initiative, this latest recovery plan.

What I want to get some understanding from you on has to do with the collective agreement. I think I understand what you want to do here in terms of deploying your resources to those areas that are going to require them. I thought it was particularly helpful that you talked about, for example, the operators are not the largest number but they have the longest training time. What I'm trying to understand is: How are you going to move people around, bring people in, upgrade people in this three-, four-, five-year period and deal with what must be constraints in the collective agreement and related aspects?

Am I right in saying there are some challenges there, and to the extent there might be, how do you intend to deal with them since you've got a major manpower problem, or challenge, here, and you've made some assumptions about your ability to deal with it in a relatively short period of time. That's assuming you're not going to find a lot of surprises along the way?

**Mr Machon:** A very astute observation. That is, if not number 1, then 1A in the issues that need to be dealt with right up front. I think you've hit the issues. I thought we were going to have an overhead, but I'll try to talk from what's in front of me. The present situation we have obviously has skill mix issues that we have to deal with. It has geographical location issues. Part of the reason for putting a plant into lay-up is to create the additional resource I can move to the other facilities — in some cases operators that can do rounds; they can't necessarily operate the unit, but they can go out and walk around the plant and know what they're looking at — to move them, say, from the Bruce site to the Darlington or Pickering site.

We have an aging workforce too. The average age is well up into the 40s. If you look out past the near future, you'll see some folks hitting the rule of 85 and 90 pretty quickly, which causes the attrition rate to move just beyond normal but we have some retirements coming in.

That leaves us to deal with issues in the terms of the contract, around surplusage, around relocation, around retraining, which you mentioned, and the use of contractors, ie the PSA portion of the contract. We have put together a project that is working under nuclear human resources at this point, but also working with corporate, to specifically address and try to work and come up with some solutions to this problem so that we can get the right skills at the right locations, which is paramount in doing this, and get the training pipeline established.

When I say pipeline, I don't mean just for the immediate needs. If I look at retirement and attrition beyond a normal three- to four-year time frame and I look five or six years out, I've got to start filling my operations train-

ing pipeline right now and my apprentice program pipeline right now, to provide that resource available out in the future.

**Mr Conway:** But on that point, Ernst and Young was asked to do an assessment of, by and large, the financial aspects, but in their assessment, which the committee received in recent days, they themselves have raised a concern about some of the assumptions on the critical question of labour issues. We now realize, I think at least I do, that some very well-intended policies initiated three, four, five years ago had some very serious unintended consequences on the labour front. What I need from you is a more specific response around how you intend to manage in light of some significant challenges that I understand you face with the collective agreement and related issues.

**Mr Machon:** As I said, there has been a project set up. I'm not privy to the output of that project right now.

**Mr Conway:** How confident are you that project is going to deliver the results you need to meet these targets?

**The Chair:** Very briefly, please. We're well over.

**Mr Machon:** The needs are understood. We're waiting for the results of what they're coming up with for the recommended actions. It is tenuous. We need to get on with it. You're correct.

**The Chair:** We're going around a number of times. We're not stopping the first time, so keep your thoughts going, Mr Conway.

1110

**Mr Laughren:** What puzzled me when I read the NAOP was not so much the options contained therein but why thinking so big was necessary; in other words, shutting down all those units, the seven units. This may be a question that may not sound like it's got much sense to it, coming to someone who is an expert in the field, but what would have happened if you had shut down one unit at a time — fixed up one unit, fixed up another unit, did another unit? Is it because it wasn't so much a physical problem as other problems associated with it?

**Mr Machon:** There are a number of issues that focus on that. Obviously one was creating the resource to be able to deal with the issues we had. Thinking about taking a four-pack, if you will, out at a time was one of the key options we looked at.

Also, we need to understand that the economies of scale that are offered by the Candu design are such that if it takes, for example, 100% of the people to run one unit, when I put the second unit in service, it only takes another 70% to do it. So instead of having 200%, I have 170% of the resource. As I add the third and fourth units, it's normally about 40% of the resource on top of that. As you think about saying, "I want to keep one unit running," in a four-pack, for example, it's not just a quarter of the resources now that I need to run that; it's more than a quarter of the resources.

Also, the shared systems that are shared between units, the more I keep them in service, the more I cause an interaction between the two units I have to manage as I'm

trying to recover the other unit; an additional level of challenge, if you will, to the effort.

Playing heavily was the material condition of the Bruce A units and the fact that the Pickering units were going to be down for the majority of 1998 anyhow because of a commitment that was made to the AECB to install the other safe shutdown system. Those are the main factors, trying to get on, and the timeliness.

**Mr Laughren:** The heavy water plant is shut down now, isn't it?

**Mr Machon:** Correct.

**Mr Laughren:** Is there any intention to reopen it?

**Mr Machon:** Not to my knowledge.

**Mr Laughren:** So that's a done deal.

**Mr Machon:** Right.

**Mr Laughren:** When the Power Workers' Union came forward and indicated that they wanted to take some precautionary measures to save the heavy water plant, because of the temperature dropping and so forth, I didn't have my wits about me that day to ask them why. Why would we want to save the heavy water plant? Is there a reason?

**Mr Machon:** No, we can't come up with one. (1) We have all the heavy water we need now through the life of the plants. (2) The contract that was in place, we have enough heavy water stored that if they want to exercise the deliverable, we could deliver it today. (3) It has resource that we can use other places in some of these efforts.

(4) The technology, fundamentally, has passed by what we have in the heavy water plant out there today. Those were the key elements in deciding to shut it down.

**Mr Laughren:** What happens to that plant now? Does it have to be decommissioned?

**Mr Machon:** Yes. It will be disassembled. You'll be out there tomorrow, I believe. Aren't you going to Bruce tomorrow?

**Mr Laughren:** Correct.

**Mr Machon:** You'll notice there are a couple of empty slots in between. There have already been a couple of them that have been taken down.

**Mr Laughren:** Actually dismantled?

**Mr Machon:** I believe there used to be three or four — four towers out there. I think there are two now, one of which is operational or was operational.

**Mrs Helen Johns (Huron):** I'd just like to go through some of your slides again, if we might. The first slide I'd like to direct your attention to is the capacity factor slide, page 2. On this sheet, when we look at the benchmark, we see that only in 1994 on the benchmarks was there ever 86% reached. One of the criticisms of the Ernst and Young study is that you have ascertained that you're going to move from a capacity factor of 65% up to 86% and they're not sure about the logic or the accuracy of that forecast. When I look at this capacity factor of where we've been when the equipment was substantially younger than it is today, I see that in only one out of the last six years have you been able to reach that factor, if I'm reading this correctly. How did you ever come up with 86% capacity factor?

**Mr Machon:** First, there's a point of clarification. The top line is not us; the top line is the benchmark.

**Mrs Johns:** So that's the ability of the industry to be able to come up with that number. Is that correct?

**Mr Machon:** A composite utility of the same size. For example, I grabbed the Oconee plants, three under one roof, old; I grabbed Catawba and McGuire, newer plants; I grabbed Byron, Braidwood. I just took a sample of plants and built a utility up normally to the same size, going through bumps and grinds, which is why they were up and down during that time frame.

The rationale is twofold in achieving that. One is that we get into a discipline of planned outages on a regular basis. In other words, every two years you take the unit out for a maintenance outage — religiously. You do it normally for — we call it a long one and a short one. You start out at a 50-day, then you go to a 35-day, then you do a 50-day and you do a 35-day. You need a well-planned, well-executed — it's based on equipment failure history rate as you go through it. So you're now beginning to understand fix and plan around an outage schedule, just like you would take any production facility down in the summer.

The second major metric in that is something called operating capacity factor. Operating capacity factor is a measure of how well I run between outages, from the time I close the breakers from the preceding outage until I open the breakers in my next outage. How well do I run the plant in that interim? We started in the recovery plan here looking at an 85% operating capacity factor. So throw the outages out for a minute and think of in between. In the better plants, the plant I came from, my goal was 95%, in other words a 5% forced outage rate, and we achieved it: 93% to 95%. So you're increasing expectations over time as you move that. You can do the math by taking the number of days out of the year and dividing by the days of the year and you can figure out where you end up for capacity factor.

The third key element and one of the top 10 issues we're on right now is what I'll call the work management schedule or the rolling 13-week schedule. You divide the year up into four, and again religiously, in a given week, a system, a set of components, is scheduled to be taken out and worked on. You load the base of that plan with your preventive maintenance program and your safety surveillances, the tests you do, and you leave a cushion in there for corrective maintenance and priority work that's going to come in. While you're taking care of the unit while it's on line, which brings your operating capacity factor up, you set up and you manage your outages the way they should be managed. It's not an event. An outage is nothing but a plant condition. I don't change the way I do work. I may work at double shifts, but I don't change the way I do work, and I do it with discipline all the way through.

My goals in a cycle were set in the high 80s, and we achieved them three years running. Those three elements combined and working together — and it takes time. We don't all of a sudden just step to that level in this plan that we've got; it works up to that level in the end.



**Mrs Johns:** When was the last time that Darlington, Bruce B or Pickering B ran at 86% capacity?

**Mr Machon:** What I have in front of me, I don't have a year by year, but we could certainly get that for you to give you those answers.

**Mrs Johns:** Okay, I'd like to see that.

**Mr Machon:** The rolling average, for example, for Darlington, 1994 through 1997, was 81%.

**Mrs Johns:** The last question I want to ask you about this is that when I read the Ernst and Young report, it doesn't look to me that there's a gradual increase in that number from whatever we're at now — 65 or 70 — up to 86. It looks like in 1997 we're working with 86% capacity; 1998 we're working with that; and 1999. Did I miss that? Tell me the graduation you have worked into this plan.

1120

**Mr Machon:** I can give you the details of that, but fundamentally it's starting with laying in the realistic outages with the work that we know we have to go through for the recovery, then progressively over a five-year time frame shortening the outages as we're building up the rolling 12-week schedule; starting at an 85% operating capacity factor and increasing normally 1% per year for I think the first two years, and then 2% in the last two years, to bring it up to a reasonable level for operating capacity factor. So it is a gradual increase on operating capacity factor and it is a gradual decrease in outage durations.

**Mrs Johns:** Can I just rephrase what I think I heard you say?

**Mr Machon:** No problem.

**Mrs Johns:** You're starting at 85% capacity factor and moving up by 1% per year, and then in the last couple of years you're going up by 2%?

**Mr Machon:** No. Starting with an 85% operating capacity.

**Mrs Johns:** Operating capacity, okay.

**Mr Machon:** How I perform in between outages. It's a combination of how I perform in between outages and how well I manage my outage. That's what gives me the overall capacity factor.

**Mrs Johns:** I'll probably have more questions as I read through your answers. I'll get back to you on that one. That's complex for me.

I think you're saying in page 8, when you're going through the detailed planning base, that you did all of this work on the left-hand side. One of the things we're very interested in in this committee is the decommissioning studies. What did you find when you did that work on the decommissioning studies?

**Mr Machon:** The good news is there were decommissioning studies.

**Mrs Johns:** There were some available?

**Mr Machon:** Yes.

**Mrs Johns:** For Ontario situations?

**Mr Machon:** There are decommissioning studies.

**Mrs Johns:** Okay. Let's hear about them.

**Mr Machon:** In the decision-making process, if you notice even in the base report, because of the time frame we didn't — that's a financial implication as opposed to a cost implication on where we're moving over this time frame. If you notice, if we choose to early on make a decision to not recover the units, then you're going to have to consider decommissioning costs. If we did it tomorrow — say I don't want to bring Bruce A back — then I've got to factor in the decommissioning because I've made the decision, or as part of the final decision-making process with regard to recovery it will have to be factored into the decision.

**Mrs Johns:** Let me ask you this question then: How did you evaluate case number 6, which is the lay-up of A units permanently, if you don't know the decommissioning costs or if the financial numbers for the decommissioning costs aren't available?

**Mr Machon:** By making that exact statement.

**Mrs Johns:** That's frightening.

**Mr Machon:** I believe it's in there. By looking at the costs associated with it, the statement in there said the costs do not include decommissioning nor the write-off of these assets from the balance sheet. These costs are substantial. This results in — walk through the analysis in getting there. Without those costs in, it's the least-cost option, I believe, when you look at it.

**Mrs Johns:** When you had this little board meeting in Orangeville on the 22nd to the 24th when you were deciding on strategic planning sessions, when you were deciding where you were going —

**Mr Machon:** It wasn't a board meeting.

**Mrs Johns:** I'm sorry, a three-day meeting of the minds.

**Mr Machon:** In nuclear.

**Mrs Johns:** In nuclear. Any financial data at that meeting?

**Mr Machon:** The costs associated with the alternatives that have been developed, yes, if you call that financial data, for each of the projects, each of the interrelationships, the labour costs, material costs and service costs.

**Mrs Johns:** But obviously there were some gaping holes in these financial data when we've just gone through number 6 and we didn't have the decommissioning costs and we're figuring out the costs of permanently laying up the units.

**Mr Machon:** Understand our charter.

**Mrs Johns:** I am — to make a good decision for the taxpayers of Ontario.

**Mr Machon:** With regard to the nuclear option, correct.

**Mrs Johns:** Let me just say, laying up permanently unit A is a nuclear decision.

**Mr Machon:** Yes, and it hasn't been made.

**Mrs Johns:** Okay. You've just answered my question about the options on number 9. Except for the decommissioning costs, you felt you had all the costs to be able to make the decisions between case 1 and case 5.

**Mr Machon:** Correct.

**Mrs Johns:** Do you have those costs with you today?

**Mr Machon:** They're in the report that I believe you have, which is the basis.

**Mrs Johns:** I'd like to see them broken down more substantially, I guess, by specific case. I don't think I've seen them to a level that appeases me that things have been considered.

**Mr Machon:** We can provide them to you.

**Mrs Johns:** Humour me on that and send that to me, if you can.

**The Chair:** Thank you, Mrs Johns.

**Mrs Johns:** Oh. I have one more question.

**The Chair:** I'll let you do one more question. I think that would be reasonable.

**Mr Conway:** Humour Mrs Johns.

**The Chair:** I will follow the Conway model. Otherwise I know —

**Mr Machon:** She's on a roll.

**Mr Conway:** I'd like to humour Mrs Johns.

**The Chair:** This is coming out of Mr Conway's time.

**Mrs Johns:** He'll want something later, I know.

On page 11 you said, and this was very frightening to me, "I don't think Ontario Hydro has hit the bottom yet," and that was a quote from you. Could you explain to me, hit the bottom of capacity, reliability, debt to the taxpayer? What bottom haven't we hit yet?

**Mr Machon:** Discovery. I think we're going to find more issues that we're going to have to deal with as we go through reconstituting all the programs.

**Mrs Johns:** Is that going to cost the taxpayers more money?

**Mr Machon:** If you tell me what I'm going to discover. I believe, based on our experience — a team that was brought up here has been through a number of these. We believe the way we have put this together, which again makes it different from some of the previous plans, is that we'll be able to walk ourselves through these issues. We have put some of the processes in place today that, should we discover something, we can deal with it while it's there.

Our main concern is operability; ie safety: Will that component, will that system, function in its intended manner when it's called upon to serve? If we find something that rings no, we're going to have to take some actions. We put the process in place to do that.

From a sense of a challenge to the generation, that's why I chose 85% operating capacity factor as opposed to saying, "It ought to be able to do 90%." We built some margin in to be able to do that. But there are certainly going to be additional discovery issues. I think even Carl said it when he was here before you. We're going to find some more things over the near term, particularly if you go looking hard for them.

**The Chair:** It would be reasonable to assume that would also then presuppose additional costs.

**Mr Machon:** Not necessarily.

**The Chair:** I see.

**Mr Machon:** Maybe a little overtime here and there, but no, it's potentially —

**Mrs Johns:** That's cost.

**Mr Machon:** I believe we have accommodated for what is a nominal amount in the planning we've done.

**The Chair:** Picking up on the questions by Ms Johns, will you ensure that you speak with our consultants and ensure that we have the decommissioning studies, we have the cost estimate and everything that is before us? Make sure we have all of that, will you, please? You'll check with Ms Johns to make sure it's done on the details we particularly want.

**Mr Machon:** I can do that.

**Mr Conway:** It's amazing how Ms Johns anticipates what's going on in my mind because, Mr Machon, I had a note to myself quoting you as, "I don't think we've hit the bottom yet." I thank Helen for raising that.

**Mr John O'Toole (Durham East):** Great minds think alike.

**Mr Conway:** Great minds do think alike. You're right, John.

**The Chair:** Shall we recess?

**Mr Conway:** Not just yet.

It struck me that you went out of your way to tell us that, and one of the difficulties I think the committee has had, particularly some of us who have been around this debate, is that Ontario Hydro Nuclear is not like Holiday Inn; there are always more surprises than these proponents ever seem to want to admit. I wish it were not so. I will take what you said very carefully about not hitting the bottom yet.

I think one of the surprises we're going to find is the labour problem. I am not at all confident on the basis of what I think was a fiasco in 1993, 1994 and 1995. I keep meeting people at Ontario Hydro Nuclear who tell me that you would have to have been an idiot not to have taken the exit package that was offered. It was indiscriminately offered. Many of the wrong people appear to have left. I want to come back to that question.

You tell me there is a project under way, but it's now almost November 1997 and the nuclear asset optimization plan is really a five-year plan from 1997 to 2001, as I read the documents. So we're heading into it.

**Mr Machon:** Hopefully it's a business planning process that just keeps going.

1130

**Mr Conway:** I agree, but the front end of it is that five-year period that your data speak to. Tell me more about this project, because I am not yet at any kind of a sufficient comfort level knowing that you're going to have the flexibility to move the right people where you need them at the right time and bring the right people in to put them in the right place at the right time.

**Mr Machon:** At this point in time, I don't have that level of comfort either to give you the specifics of that. I know it's in progress.

**Mr Conway:** Who's in charge of it?

**Mr Machon:** Jim Crist for nuclear, human relations.

**Mr Conway:** What are the reporting times? When do you expect to hear back from those people as to the design?

**Mr Machon:** I want to say mid next month.



**Mr Conway:** We're talking about hundreds or thousands of people. I also noted that you said the increased training package you've talked about is going to be 240 hours per person for over a two- or three-year period.

**Mr Machon:** Yes.

**Mr Conway:** We've got a lot of work to do with a lot of people.

**Mr Machon:** Yes. Key to supporting that is getting the details of the workforce plan done, which is an integral part of the business plan, and getting the specifics about who is going where or who needs to go where or who can go where etc, what this whole resource profile looks like. That's being developed by the sites and the line consistent with the strategy that's being developed by human resources. We're working together in getting that whole profile laid out.

**Mr Conway:** You said something in your earlier testimony that I wanted to pick up and it had to do with the decentralization plan that was developed a few years ago. It now looks, in retrospect, that that really, while well intended, probably caused as many problems as it solved.

**Mr Machon:** It appears that way. To me one of the great advantages that we have, not only from an organizational standpoint but from a design standpoint, is the economies of scale and the ability to share lessons learned from site to site, to set up standard ways of doing business focused around the best and leverage that into the other sites, into the other organizations. I think that opportunity was missed. During that time frame there was very little of that going on.

**Mr Conway:** From a management point of view, since the management culture seems to be such a fundamental problem, what are you going to have to do to undo the problems that have arisen over the last two, three or four years in that particular area?

**Mr Machon:** Some activities are already under way. One is a strong central function, if you will, with the standards and expectations and policies coming out of that function. We have taken those existing procedures — for example, an alarm response procedure in a control room. I'm sitting on watch in a control room and the alarm comes in. What are my expectations on how I'm going to respond to that alarm? How do I move through it? What does that procedure look like that I open up to respond to that alarm? Today, or within a couple of weeks — that would have existed as four different procedures, all telling you to do the same thing in different ways. What we're doing now is developing one standard, one set of expectations that will replace all four of those. We're setting up a hierarchy or a managed system to do that.

**Mr Conway:** On the personnel issue: One of the concerns I still have is you yourself said a while ago that this was a company, Ontario Hydro Nuclear, that was substantially an engineering and design outfit, that with the completion of Darlington wasn't designing any new projects, and now we're at a situation where OM&A is the real challenge in this corporation. What measures have you taken or do you intend to take to make sure that you don't have, in critical locations, people with a very defi-

nite engineering and design outlook trying to manage OM&A issues that are foreign to the culture from which they came and in which they've worked for a decade or two?

**Mr Machon:** Part of this goes back to the training issue. Let me deal with a specific around that area. In an operating environment, the engineer who leads the charge, if you will, is called a system responsible engineer. He actually is more involved in the performance of the system as opposed to the design, that aspect. That function was woefully understaffed, and in some cases non-existent. It has been created. It has been sanctioned, if you will, in staff, and people are being moved into that function. There will be training required as we move them into that function. A lot of those folks will come from the design organization.

**Mr Conway:** Are you confident you're going to be re-deploying people who are going to be amenable to this new scheme of things?

**Mr Machon:** Some will and some won't.

**Mr Conway:** How are you going to deal with the "some won't" problem?

**Mr Machon:** Some that won't enjoy doing it will leave by themselves because the accountabilities and the deliverables will be well specified and you'll deal with it through the performance system.

**Mr Conway:** You're confident that will happen.

**Mr Machon:** Yes.

**Mr Conway:** Some of the things you report to this committee of laypersons are, at one level, just incredible. I find it absolutely astonishing that some of these targets and policies and programs that were advertised just never took root for a whole series of interesting and complex reasons.

**Mr Machon:** I believe there is simply one reason: They need to be continually reinforced.

**Mr Conway:** Back to page 16: Mr Laughren was talking about the category in the upper left-hand corner, the \$268 million on managerial systems, accountabilities, structure, training etc. You said the bulk of that spending envelope is going to be training. I think I heard you say that.

I want to go to the upper right-hand corner, \$1.125 billion. This is part of the recovery plan: the "regulatory and technical basis that defines and reflects the plant and the work process that utilize that basis to operate, maintain and engineer the plant." I'm still not clear what that \$1.125 billion is going to be spent on.

**Mr Machon:** I wish we had an overhead set up here.

**Mr Conway:** Well, we don't and we have limited time.

**Mr Machon:** Let me take you through this brick by brick. This is the licensing basis — code, standards, regulations — tied through procedures and programs. Preventive maintenance program is in this box; the air-operated valve program is in this box; the motor-operated valve program is in this box; vibration monitoring is in this box. The calculations that support the size of the valve, the setting on the spring pack, the size of the motor on top of the operating, the size of the pump.

**Mr Conway:** That's helpful. That's more helpful than the original go and that's probably my fault and not yours.

**Mr Laughren:** Have you had a chance to read the Ernst and Young report?

**Mr Machon:** I saw a smaller version of it, yes.

**Mr Laughren:** It's quite an interesting and in some ways disturbing report. They're talking about the NAOP. On the range of options being considered — I'm somewhat preoccupied with the range of options because I'm really concerned that they weren't explored adequately — they say:

"Evidence supporting the examination of a comprehensive range of options with respect to the nuclear program was not available. Potential options were not documented in a manner that adequately supports the selection of the NAOP option presented to the board."

I can see your position in that you're the nuclear guy, right? That's your thing, and it's Carl Andognini's thing too. What I don't understand, and perhaps you can help me here, is when you came up here, there must have been some framework within which you were to operate; i.e., "Don't worry about other options" — these are my words. "Your job is to go and develop a nuclear option." That to me remains a puzzle, why that would be the approach by Hydro. Can you help me there?

**Mr Machon:** Fundamentally, that was it: What do I have to do to turn the nuclear program around? Getting the assessment and getting to understand the size of it, and then, what are your recommendations around nuclear based on those issues?

With regard to the Ernst and Young findings specifically, in the board presentation we walked through those options in slide format, much like I did here, and that comment is what resulted in the preparation of the basis for recommendation. We documented it and went through the discussion we had, so we had a piece of paper that somebody could read and rationalize their way through it. But clearly, our charter when we came up was to arrest the decline and find out what's going on with nuclear and make recommendations around that to recover the program.

1140

**Mr Laughren:** You give me the impression of being, if I may be personal for a moment, a thoughtful person who's trying to do the best you can for a public institution.

**Mr Machon:** Thank you.

**Mr Laughren:** I would give you that, gratuitously perhaps but I would give you that. What I'm wondering is whether it ever went through your head: "Wait a minute now. Look at these numbers. Am I really providing responsible advice by sticking to the nuclear option?" Did that occur to you or your colleagues that —

**Mr Machon:** You mean the throw-it-all-away option?

**Mr Laughren:** That's a very good way of putting it. You tinker with the possibility of not reopening the A units, right?

**Mr Machon:** Yes. I think our intention, with regard to those business cases, when they brought forward both the

Pickering units and the Bruce units, is that they will have to stand the test against gas, cogen, coal, nuclear.

**Mr Laughren:** But they don't.

**Mr Machon:** No, the decision has not been made. The direction has been agreed upon. Part of this plan is to bring forward at the appropriate time the business case to support the recovery of the A units, given some alternatives that I assume Pat is going to bring forward and will have to be able to stand the test. If we don't stand the test, then they'll move into the decommissioning area, I would believe. That's the way the plan was laid out: Focus the energy on the 12, and based on substantiated business cases which will consider other options, bring the A units back.

**Mr McNeil:** During the course of my presentation I'll touch on the options we reviewed and our process for reviewing the options for the longer term as well, which I think will bring you the clarity you wish to see.

**Mr Laughren:** I appreciate that.

**Mr Machon:** It isn't that Pat and I weren't talking during this process either.

**Mr Laughren:** No, I would never imply that. There's a section in the Ernst and Young report that deals with labour issues and in it they talk about assumptions that you make dealing with labour issues that may or may not be appropriate. It has to do with bumping rights with workers under their collective agreement. It says, "There has been no analysis or sensitivity to provide for the following potential labour responses to the plan." One has to do with the bumping provisions. The other has the unions requiring guarantees with respect to potential job losses as a result of plant closures, and the unions possibly rejecting the significant retraining and job reclassification expected to occur during the recovery period.

I don't want to make assumptions on the part of labour here, but what has happened since this report was tabled to sit down with I guess the Power Workers' Union and the society of engineers to talk about going forward now with this plan?

**Mr Machon:** I think that's along the same vein as the question Mr Conway asked. What we've done is pull the project together and get the human resources and the workforce plan assembled to the point where we can start to deal constructively with the represented folks.

**Mr Laughren:** But at this point in time. This didn't happen before obviously when you were doing your assumptions.

**Mr Machon:** No.

**Mr Laughren:** I think that's what's bothering Ernst and Young and bothering me.

**Mr Machon:** It was also flagged in the presentation to the board as a major threat, and this is what we were doing about it. To get to this point with this level of detail in the time frame we did was relatively aggressive, so we kind of move in real time with each other through this process and a recognition of that was to leave it to the fourth quarter of this year to flesh out the detailed plans and get a better handle on it.



**Mr Laughren:** The Power Workers' Union was critical of the fact that Mr Andognini's group, of which you were part, didn't talk to them during the whole exercise leading up to the alternatives.

**Mr Machon:** Not regarding the alternatives. I believe the majority of that is a management decision on the direction you want to go in. However, with regard to moving through the process, I had a couple of meetings with John and showed him where we were going with the business plan and the overall intention and the performance indicators we were putting in place, at least a couple of times during the process.

**Mr Laughren:** And with the society as well?

**Mr Machon:** Yes, at least one with the society that I think I remember.

**Mr O'Toole:** Thank you very much for a very technical presentation. I appreciate it. I think I followed most of it, at least your explanation of it. I don't really know where to start, but I'm just going to go through sort of page by page because as you were making your presentation, I made a few comments.

I'm looking at the capacity factor. Ms Johns mentioned it. I really have a question there. I used to hear the expression that there was excess capacity at Ontario Hydro, that demand was the problem, not the capacity. Is there any substance to that?

**Mr McNeil:** I'll be speaking in the presentation I'm about to give if time —

**Mr O'Toole:** Oh, okay.

**The Chair:** There's lots of time.

**Mr McNeil:** Good. Then I'm available.

**The Chair:** So are we.

**Mr O'Toole:** One of the underlying factors in the economic model is to make full utilization of assets. So there are some underlying accounting functions that I have some problems with as well, not particularly in this presentation but in the overall optimization plan. What is your confidence in being able to operate at the 85 percentile range, scheduled outages and all that stuff? What's your confidence?

**Mr Machon:** Operating capacity factor or overall capacity factor?

**Mr O'Toole:** The operating capacity factor of 85%, that's your goal. Is that attainable?

**Mr Machon:** For the B units and Darlington I believe it's attainable.

**Mr O'Toole:** Very definitely attainable. That's very good.

**Mr Johns:** For the Bs and Darlington?

**Mr O'Toole:** The Bs and Darlington, right. The As, when they come back up with all the money spent on them and all the maintenance, will be probably in the same range?

**Mr Machon:** We'll start it and then using the same techniques, starting earlier on at the 85 and then ramping it up over time to the higher levels.

**Mr O'Toole:** I guess you've explained it for me, but I want to verify it for my own understanding: It's my understanding when we listened to the AECB and others, and in

fact Mr Andognini made mention that you really took everything that had been studied and reviewed, whether it's peer reviews or whatever, and those were the kinds of baseline documents. This is what you're telling me on page 7, that you took what was known and organized it.

**Mr Machon:** Correct. That would be —

**Mr O'Toole:** Did you do any other R and D type of overview, architecturally or technically, with respect to their recovery plans? We've heard from AECB that the first generational failure was between 1985 and 1995 at Bruce. They had a real serious identification of a problem. They said, "We need 10 years to recover on this." They never met that goal. They haven't met any goal actually. But all of those observations of systems failure or aging were all part of the documents in the background. You just organized and put a technical framework around that.

**Mr Machon:** A framework around it, correct.

**Mr O'Toole:** I think you've done a very good job of explaining, I guess, what was known and put it into some kind of deliverables.

**Mr Machon:** Correct.

**Mr O'Toole:** That's very good. I still like the overall plan, but on your page 8 you had one thing there that I'm still uncomfortable with. You said there were decommissioning studies on the left-hand margin. The last report group you looked at was decommissioning studies. These of course would have factored into the non-nuclear alternative. What if you knocked out a whole site? Have you got something like a number?

Say you just closed Bruce. Let's say we've got too much capacity operating ineffectively. Is the decommissioning greenfield? One of the presenters told us that when you're decommissioning a nuclear site, you just cut it up into little bits. That's actually what the guy from British Energy said. Dr Jeffrey said you just cut it up into little bits and put ceramic around it and bury it. What's the cost of decommissioning a site? Is it \$5 billion? Is it \$100 billion? Is it \$50 million? Any idea? Numbers are pretty liberal at Ontario Hydro. Maybe you could just to the closest billion — or \$10 billion for that matter. What's the difference really?

**Mr Machon:** The present 1996 estimates for Pickering A, we have \$689 million, and for Bruce A, \$875 million.

1150

**Mr O'Toole:** That's a permanent closure, walk away, everything, you can grow corn and wheat on the property. I hear the number's like \$50 billion per se. I mean decommissioned. I mean decontaminated. I mean contained. I don't expect the answer now, because you've got a lot of big books there. But in my view there's no strategic plan for decommissioning a site that I've heard of, not from British Energy and not from any of the other people, including AECB. We've got high-level storage, we've got medium-level and we've got ponds or swimming pools. The actual technology of nuclear is evolving as fast as you can keep up to it, in my view. Is this not a reasonable layperson's confidence interval?

**Mr Machon:** Without talking directly to the numbers, there are two plants where I have a little bit of knowledge about what they're doing in the decommissioning stage. One is Trojan. I used to be the plant manager there just prior to the shutdown of Trojan. They are in the process of disassembling that plant and bearing it up to Hanford. They didn't grind it up in little pieces. They took the major components out and kind of loaded them inside each other and filled them full of cement and what not and they're going up to Hanford and being buried.

**Mrs Johns:** Going where?

**Mr Machon:** Hanford, Washington. They clearly have the intent of returning that site to greenfield over the time frame. I've lost track of what the estimates are to do that at that plant, but it's a work in progress.

**Mr O'Toole:** Yes, a work in progress.

**Mr Machon:** We're going through that there and we're going through it at Yankee in Rowe, which is a very small plant in western —

**Mr O'Toole:** Environmental hearings and relocation and all that kind of stuff. I appreciate that.

I liked your analogy when it came to page 10, "Key Influencing Factors," the way you described why we're spending \$5 billion in the personnel area as part of this recovery strategy. You compared it to pulling a string through a very complex maze and at the end of that string you've got a procedure manual that tells you how to fix every pump and every valve in every building in every bay in every plant. Is that right?

**Mr Machon:** Correct.

**Mr O'Toole:** That's a lot of work.

**Mr Machon:** Correct.

**Mr O'Toole:** Wouldn't somebody who designed and sold you that Candu reactor, AECL, have some of these base documents? I know there's site engineering or — how would you say? — facilitating and design to a site. I know there would be onsite documents that are engineering, reinforcing, all this kind of thing. You're telling me some of those documents aren't around?

**Mr Machon:** Potentially some are not around, but very few of them have been kept up to date in regard to changes. It's going back and revisiting, revising, updating, getting in touch with vendors. Some of the vendors have gone out of business and in fact that component may have been replaced with another component like in kind, form, fit and function.

**Mr O'Toole:** You have to redesign it all. The procedural at the sites in Ontario Hydro Nuclear have been neglected for the last decade. This is what you're saying in a kind of summary statement.

**Mr Machon:** True.

**Mr O'Toole:** I'm going to ask about another issue. It's basically the same. It's talking about past management practices. We had Mr Strong here, whom I've had the greatest admiration for — the United Nations and a lot of world recognition. Far be it for me to say anything even slightly critical. However, I've heard some contradictory — Mr Andognini told us that one of the poorest decisions he has seen was setting up the three sites as competitive

business units. You've also made the same assumption here. You suggest there should be common systems, common documentation and common procedurals or recoveries. When you broke this down, I understood, even some of the documentation between sites for safety or fire or routine maintenance varies according to site.

**Mr Machon:** Correct.

**Mr O'Toole:** That's a fairly risky situation when you'd like to have a central office here on University Avenue saying, "Here's the fix for that particular problem."

**The Chair:** Thank you, Mr O'Toole.

**Mr O'Toole:** I've got three more questions.

**The Chair:** Not right now, but thank you very much. Do table them. I'm moving on. Time goes by very quickly, doesn't it?

**Mr Kwinter:** Mr Machon, in your presentation you talked about the deterioration of the facility. What I'd like to know is, is that due to aging or is it due to the poor maintenance and poor management of the system?

**Mr Machon:** Yes, yes and yes, I guess.

**Mr Kwinter:** If you had to rank them, would number one be the management and maintenance and number two the aging, or on an equal basis?

**Mr Machon:** The equipment is going to age and we need to recognize that. The effects of aging will show up, like an elastomer that gets hard that I need to replace every five years. If I leave it in there for five years it's going to get hard. The translation of that into the maintenance program would be a callup that comes up normally before five years and says, "Go out and replace the O ring or the diaphragm in that valve prior to it aging." If I don't do that, then aging is what gets me, but it was the lack of the maintenance program that set me up to be had. Does that make sense? Then it's the management of the maintenance function to recognize that program has to be in place to make that occur. It's a bundling of the three pieces together.

That can deal with what I traditionally would call a consumable material; we know it has a given life and I have to deal with it. There are erosion, corrosion, pipe — if I just push a lot of flow through pipe a lot of time, eventually it'll get thin-walled and I'll have to replace it. There are inspection programs I can put in place to monitor how that erosion is progressing and take proactive action; rather than let it get me, I get it before it gets so thin that it's showing through-wall leakage in those areas. It's a combination of the three. You need all three in concert to make it work for you.

**Mr Kwinter:** Conventional planning gives a useful life to these reactors of 40 years?

**Mr Machon:** I believe the design life is 40 years. We're seeing some indication that the boilers may require work before that and the pressure tubes may require work before hitting the 40 years, but the 40 years is the design life of the plant.

**Mr Kwinter:** Given the fact that we haven't lived 40 years in that cycle, as you go through it, have you found



that is a realistic assumption or is it actually, because of your real experience, less than that?

**Mr Machon:** What we're seeing right now is that steam generators or the boilers are showing some accelerated aging now that will probably require them to be replaced prior to reaching the 40 years, and for the pressure tubes, the inspection program there is indicating there will be some work required prior to reaching the 40 years.

Although those are two of the major components, there are a number of other things out there that you have to look at from a sense of can the condensate pumps, circ water pumps, travelling screens — all that's pretty conventional technology we have in fossil plants today which will run the 40-year time frame. We're learning as we move forward on the major components.

**Mr Kwinter:** My concern is that a lot of the financial assumptions are being made on a 40-year useful lifespan when, from what you've told me and what the indications are, this may not be a valid benchmark to use from a financial planning point of view.

**Mr Machon:** I can't speak to that. I know that at least in the utilities I've come from, and this is United States design as well, the generally accepted life of a plant is 40 years. That's traditionally what I've seen done.

**Mr Conway:** Just one last question: You mentioned in passing, Mr Machon, and it didn't seem to me to be quite a positive passing remark, about the troubles at Con Edison —

**Mr Machon:** Commonwealth.

**Mr Conway:** I'm sorry, Commonwealth. Do you want to just elaborate because I would be interested to maybe put the problems of Ontario Hydro Nuclear in some other North American context. Do you want to just talk a little bit about Commonwealth.

**Mr Machon:** The reason I chose Commonwealth is they basically have 12 reactors. They're spread over more sites. They're basically in pairs. They're about 1,000 to 1,100 megawatts apiece. They started with a very old one, a Dresden design, which was in the 1970s, and moved forward to Byron and Braidwood, which are the new ones. Commonwealth Edison's plants have been on and off the watch list. If the AECB had created a list of troubled plants it was increasing inspection on — the NRC, the Nuclear Regulatory Commission, calls that the watch list in the States; in other words, they are watching you a lot more. They have had plants on and off the watch list for many years and have had repeated attempts at trying to bring performance up on all the units, unsuccessfully, over those years, and still struggle with it as we speak today. They have not demonstrated the ability to get there and sustain it.

**Mr Conway:** Similar to Ontario Hydro Nuclear?

**Mr Machon:** A lot of the same issues. Where I came from, Tennessee Valley Authority, Browns Ferry plant, we were the charter member on the watch list and it was only until we got the second unit recovered and brought back into service and performing over that same time frame, like we talked about, that we were removed from the watch list, the whole site. That's a three-unit site down

there, a 3,300-megawatt site. They struggle with it. My old boss just took a job with Commonwealth Edison from TVA to try to get that squared away. It would be an interesting parallel study.

**Mr Conway:** That's why I was interested in that. We might pursue that.

**The Chair:** Just to finish off for my information, a question Mr Kwinter had raised: Going back to the 40-year lifespan, in terms of the design life, you indicated in response to him that this nevertheless precludes boilers and pressure tubes and so forth; your experience is showing they're breaking down.

**Mr Machon:** Correct.

**The Chair:** I think your point was accelerating aging.

**Mr Machon:** Right.

**The Chair:** How accelerated?

**Mr Machon:** Part of the ability to quantify that is to have a sample size big enough to be statistically meaningful. We just completed a 100% inspection on the Bruce 3 and 4 boilers and we're having to plug tubes and pull tubes up there that are showing through-all degradation circumferentially to the point where continued operation could cause the tube to part in the boiler. I believe presently they were projecting about 10 more years. We're doing the analysis now based on the results we're getting in to see where that would come out.

Unfortunately, on some of the other units, the remaining units, the inspection program has not been sufficiently large enough to get some meaningful data. Part of the NAOP in the business plan is that as we take subsequent units out for planned outages, we're going to do substantial inspection and probing of the boilers with the eddy current testing to get meaningful data to be able to answer that question more specifically, rather than just sit here and say it has degradation. It is not degradation we expected to see at this time. It appears to be shortening the life. How much I can't tell you yet. You need subsequent probes in there to do a growth rate.

**The Chair:** All right. Boiler and tube replacement is a reasonably expensive task?

**Mr Machon:** Correct. That is factored into one of the options here.

**The Chair:** They are factored in.

**Mr Machon:** For Bruce A, yes.

**The Chair:** In that sense, then, there is significant give in your estimates.

**Mr Machon:** Help me understand that.

**The Chair:** The figures you've quoted today — I'm going back to a question I raised earlier — would it be reasonable to assume that all of your costs that have been projected so far are upset prices?

**Mr Machon:** No.

**The Chair:** I see. That's what I feared. Thank you.

We're going to stop the questioning in this round. We'll stop at this juncture because of the hour, it now being 12:05, and we will ask you to come back, please, at 2 pm. Yes, please, all witnesses to come back at 2 pm and we will continue this round. We'll begin with Mr Laughren again and we'll pick up from that. Then it will

be Mrs Fisher who will go on, and then one more round here. Then we'll move into part 2 of the presentation and we'll continue around again. Are we clear on that?

I'm going to ask the members of the subcommittee to please stay for a brief meeting. The committee will then adjourn until 1400 hours.

*The committee recessed from 1205 to 1403.*

**The Chair:** We will start the proceedings of the select committee on Ontario Hydro nuclear affairs.

For the next hour we are very pleased to welcome Marc Eliesen, former chairman of Ontario Hydro. We are pleased to have you with us. I know you are very familiar with the process. What we will do is obviously ask you to identify yourself for the purposes of Hansard, and then we're in your hands for a deputation and questioning rounds by caucus for the hour.

Before I get into that, just a couple of pieces of information: A report of the subcommittee meeting we held at 12 o'clock is out. That is tabled before you.

You will note, for purposes of the public, that the committee has recommended that on Monday, November 3, we hold public hearings here in this meeting room. We have approximately 15 deputations identified at this point. If there are any other names to be added by 5 pm today, please do so. At that point the list will be closed. We will use Tuesday, November 4, for expert witnesses. That may include Ms Clitheroe, that may include others our counsel and consultants recommend. We'll take that day for those hearings.

On Wednesday we will adjourn to a site tour of the Pickering facility. That evening hearings will be held for people who wish to deputize, both from the Pickering and the Darlington sites. We need names by 5 pm tomorrow to formalize the list. At that point the list will be closed. On Thursday we will adjourn to Darlington. That will take care of all our three sites.

That will be the agenda for next week. That is the recommendation of the subcommittee, and it is so moved by Mr Galt.

All in favour? Opposed? Carried. Thank you so much. That's approved.

**Mr Kwinter:** Mr Chair, just for clarification, is it my understanding that deputants from Darlington and Pickering will all meet at the same place?

**The Chair:** Yes, at the same place, one night. That is on Wednesday evening. That will allow us to have some economy of moving all the staff and all the infrastructure necessary. That will give us some cost-effectiveness there.

If I can also just remind members, following up on the comments earlier about our visit to Kincardine — I'm sorry Ms Fisher's not here yet — we had picked up on her suggestion we find an alternative site. The schools are closed, unfortunately, so we will not be able to use the school facilities. The Royal Canadian Legion hall has been booked for that evening. The Davidson community centre has been booked for that evening. The Kincardine town hall is available. It only has enough audience seating for 30 people, so it would seem appropriate to stay with the arrangements the clerk has currently made, since it is

1,800 square feet and presumably would seat more than 30 people.

**Mr Galt:** I thought they would have been cancelled for these hearings, when we came into town.

**The Chair:** There are local elections that are very important, as you know, Dr Galt, so I think it's a matter of making some tough choices. People may want to move from one meeting to the other as the evening progresses. We'll certainly welcome them as we go by. But we'll have to continue with the plans as we had indicated earlier today.

#### MARC ELIESEN

**The Chair:** Mr Eliesen, I apologize. We had to do a little bit of business before we started. Now we are in your hands. We'd be pleased with any opening comments you'd like to make. We're so pleased you're here.

**Mr Marc Eliesen:** Mr Chairman, ladies and gentlemen, my name is Marc Eliesen, from Vancouver, British Columbia.

As most of you are aware, I was the chairman and CEO of Ontario Hydro in 1991-92. I'm now president of my own company, the International Power Development Group. I've been asked by your select committee to participate in these hearings and I'm pleased to be able to do so.

I have some brief general opening remarks that I hope can contribute to the matter at hand. After, I'd be very happy to respond to any questions you may have.

For those who may not be aware of my professional background, I've had a lengthy career in senior executive positions both in the energy and utility business and in public service. In the last 25 years, I've been the chief executive officer of a number of crown corporations, private joint ventures and departments of government.

When I was at Ontario Hydro, my central priorities in that 18-month period dealt with the Darlington nuclear station and its fiscal impact on the rate base, a senior management reorganization, improving the labour-management relationship, implementing a corporate cost control program, and formulating a new demand-supply program with emphasis on demand management and imposing at that time a moratorium on new nuclear plant construction.

Since I've been involved in energy and power development in the Asia-Pacific area over the last three to four years, your clerk, Donna Bryce, has kindly sent me the documents which are the subject of your investigation and analysis, particularly the report prepared by the nuclear performance advisory group, which is known as the IIPA report, as well as the submission of the Ontario Hydro board of directors on the nuclear asset optimization strategy of August 12.

#### 1410

I have not had a lot of time to review these documents in detail, but it is my preliminary judgement that this report, the IIPA, does a disservice to the history of the corporation and the dedicated professional service pro-



vided by the men and women of Ontario Hydro. Over many decades, they have provided competitive, low electricity prices in a reliable way to the Ontario consumer. I believe the report and public statements I've seen subsequent by the current chairman and acting CEO of Hydro undermine public confidence in an institution which has provided an underlying basis of Ontario's economic growth and prosperity for decades.

There is no question there are serious and have been serious ongoing problems and challenges in operating Ontario Hydro's nuclear plants in a safe and cost-competitive manner. In an historical context, these relate to difficulties not fully anticipated by AECL and Hydro's design of the Candu nuclear plant. Further, a totally self-defeating human resource policy has contributed both to lower nuclear operational performance and the concerns expressed by the federal regulator and the Atomic Energy Control Board, the AECB. But the IIPA report analysis and language is deliberately excessive and there is a lack of context and balance in presentation.

The general deficiency, from my perspective, in the evaluation of the Ontario Hydro nuclear system by the nuclear performance advisory group lies in the application of United States criteria and methodology to the Canadian landscape. This methodology is directly transferable neither to Canadian nuclear technology nor to the different Canadian structure and characteristics in electricity generation, in the transmission and in the distribution.

While there has been some limited experience in the United States for one- or two-unit plants, there is no experience anywhere in the world available applying this methodology for an integrated — and I stress this, it is integrated — generation and transmission electrical system involving some 19 nuclear units which are operational.

I'll briefly mention a few of what I regard to be deficiencies in the report.

The definition and terms on performing ratings are American and foreign to the Canadian electricity sector. The subjective assessments of "minimally acceptable or below standard" have no comparable interpretation for Canadian nuclear plants. The authors suggest that their combined safety and cost criteria of minimally acceptable would result in all of these plants being placed on a "watch list" by the US Nuclear Regulatory Commission.

From a safety point of view, this is misleading. From their table, the summary of IIPA results at a glance, on page 6, it suggests that all the nuclear units at Darlington, Pickering and Bruce should be under a Canadian nuclear regulatory board "watch list."

The AECB standards have been recognized as world leaders and second to none in applying safety and environmental factors. Further, as Dr Bishop I believe has told you in her response to questions at this hearing, the AECB does not make rating comparisons between plants because they are different. "It's very difficult to compare one plant to another or to compare a 21-unit with a one-unit."

Finally, as Dr Bishop has stated, the AECB staff review of the IIPA has concluded that no issues require immediate regulatory action.

The report also states, "Over several decades, Ontario Hydro has not maintained a consistent long-term vision of how its nuclear assets should be maintained and operated."

I personally do not understand that observation, when for nearly 20 years nuclear plant performance at Ontario Hydro was among the highest in the world. There is no reference in the report to the tremendous problems caused, not by nuclear managers but by the then provincial government's decision to build the Darlington nuclear plant in the late 1970s, its ping-pong, stop-go construction schedule during the 1980s and the many challenges in bringing the station into operation at a time when demand for electrical power had bottomed out.

It's also worth mentioning that the government of the day decided to build Darlington despite evidence and warnings from members of a committee of this Legislature that the power would not be then needed. When Darlington came on stream, it turned out these predictions were correct.

Nor is there any reference or discussion in the report on the recent significant downsizing or restructuring undertaken at Ontario Hydro and its immense impact on morale, productivity and uncertainty in decision-making. To blame Ontario Hydro nuclear managers is unfair and simplistic at best and it is not prudent nor productive to denigrate workers by referring to them as a "nuclear cult" and at the same time request their cooperation in jointly working together to implement effective solutions to these many problems.

As an aside, I can tell members of this committee that during the time I was at Ontario Hydro I did not observe people running around in Nike running shoes wearing purple togas and chanting "Nuclear Forever." So I reject quite emphatically the description being applied to the many thousands of men and women at the nuclear plants who have served Ontario exceptionally well.

The commentary in the report on labour relations again reflects a lack of understanding of federal and provincial labour history, legislation and labour-management collective bargaining. As opposed to certain US states where right-to-work legislation is in place, the principles and benefits associated over the years in free collective bargaining have been accepted by all past governments of Canada and Ontario.

The suggestion that employees should not have the right to strike because of "the critical and essential nature of electricity" ignores Canadian utility practices where electricity workers in most provinces have had the right to strike and labour disputes have been minimal. On the other hand, if we look at Hydro-Québec and the province of Quebec, where legislation has been in place forbidding strikes, there have been many more disruptions over time in electrical service to the Quebec public than those provinces allowing the right to strike in the electricity sector.

My own experience at Manitoba Hydro, at Ontario Hydro and also at BC Hydro is that a cooperative, non-adversarial relationship between management and labour is the most effective and, as well, the least costly way to manage the generation and transmission of electricity.

In conclusion, I believe it would be fiscally prudent to analyse and review carefully the proposed recovery plan. This plan is unprecedented in its impact on Ontario Hydro's integrated generation and transmission system, on the residential and industrial rate structure, and on the various communities and regions of the province that are economically dependent on the activities of Ontario Hydro. I do not believe that an expenditure of this scale, of about \$8 billion, which has been described as ballpark by Mr Andognini, should be undertaken until there is a full and comprehensive and independent public review, perhaps by the Ontario Energy Board.

There are many serious problems and challenges facing the Ontario nuclear system, and any proposed recovery plan requires more time and a prudent and thorough analysis and evaluation.

Thank you very much, and I'd be more than pleased to answer any questions.

**The Chair:** Thank you very much, Mr Eliesen. We appreciate your deputation. We will begin the questioning by the caucus and we'll start with Mr Kwinter.

**Mr Kwinter:** Mr Eliesen, during your tenure as the chairman of Hydro, were you aware of the concerns AECB had about Pickering in particular, and that once Darlington came on line they reported that some of the maintenance problems, even though it was a brand-new facility and was only months old, were falling into the same patterns that had been detected at both Pickering and Bruce?

**Mr Eliesen:** Yes, Mr Kwinter, I was aware of that. You may recall, I was appointed Deputy Minister of Energy by Premier Peterson and worked for the Honourable Lyn McLeod when she was Minister of Energy. I've been knowledgeable about some of the difficulties — not in detail but some of the difficulties — that the nuclear plants had at that time.

When the government changed and Premier Rae asked me to go over to Hydro, in fact it was one of my first priorities to establish contact with the Atomic Energy Control Board. I had requested a meeting with the then president, Mr Lévesque. Due to a number of reasons, and I was informed there were health reasons involved, we did not get together until early October in Ottawa. I had Elgin Horton, who was responsible for the nuclear division, with me at that time. So I was aware and was attempting to attend to the areas of concern the AECB had reported.

1420

**Mr Kwinter:** The AECB has told us that it has, since 1989 at least, maybe even earlier, indicated certain shortcomings in the maintenance and management applications at these facilities. Notwithstanding that, only about 40% of their recommendations had really been followed up and some of them are outstanding for as long as about seven years. Do you have any feel as to why there was that

almost malaise or a lack of concern about the concerns raised by AECB that seemed to permeate the whole nuclear division?

**Mr Eliesen:** I think it's not fully appreciated, and I guess this is one of my criticisms of the IIPA report, that Ontario Hydro was going through an incredible period of trying to deal with problems no one had anticipated as a result of some of its design changes that had taken place, both by AECL as well as by Ontario Hydro. Equipment that was supposed to last, let us say, for 30 years was now going to have to be changed, and I'm thinking now of the tubing system, in 15 years. We're talking now primarily of the A plants.

Furthermore, AECB, starting around the mid-1980s, was insisting on certain standards that I believed at the time people neither at Ontario Hydro nor at AECL at that time had fully appreciated. When you toss in the difficulties associated with bringing on Darlington, a station, in my judgement, which should never have been built, and the kind of stop-go construction schedule, of which the capitalization only added on to the further cost, I think that gives you perhaps in an historical context the environment in which people were operating.

When I came on to the scene, I had been cognizant or aware of some of the difficulties, but I think during the latter years, when Mr Franklin was chairman as well as CEO, there had been some significant improvement from the concerns AECB had been mentioning. There had been I think somewhere in the order of 1,000 new personnel hired to assist in these, and at the meeting I had with Mr Lévesque at that time, he was pointing out, notwithstanding the list and the difficulties particularly with Darlington which was a new station, that there had been some improvement over the last year or year and a half compared to previously.

My answer basically is that one had to appreciate the historical context of what was taking place at that time.

**Mr Kwinter:** When Mr Kupcis engaged the so-called Andognini group, he admitted that the problems were well known. They were well known to him, they were well known to you, they were well known to Bob Franklin, but he wanted to quantify the problem. He wanted to know exactly the extent of it so they could address it.

As a result of that review, the IIPA study, decisions were taken. You just said in your opening remarks that safety was not a problem and that the AECB wasn't totally satisfied but wasn't concerned with the safety aspects of that facility and that these facilities were functioning. Is that correct?

**Mr Eliesen:** That is correct.

**Mr Kwinter:** What I'm trying to find out and ask you as a former chairman is that we have heard that the week before August 12, board members received this report. It was designated as an information item only, and when they came to the board meeting on August 12, it was changed from an information item to a decision item and that decision was taken on that day. In your experience as a chairman of Hydro, do you find that unusual or is that normal practice?



**Mr Eliesen:** No, sir, I find that quite unusual. In fact I've headed up about half a dozen crown corporations, including Manitoba Hydro, and BC Hydro for that matter, and a decision of that magnitude obviously requires some careful and prudent analysis, particularly if you're involving an \$8-billion expenditure. In my judgement, the fiduciary responsibility of the directors is such that this would cause quite a major impact on the rate base and normally would require a very thorough evaluation by any board of directors.

**Mr Kwinter:** Normally when you had an information item only — and I have raised this issue before because I sit on a couple of public boards and when I get an information item, it's for information. I assume that there is going to be ongoing information and that eventually there will be a basis on which to make a decision. Was that the normal practice at Hydro?

**Mr Eliesen:** That was my experience at all the hydros I've been associated with, and particularly it's not that an item under other business couldn't be discussed where it wasn't on the agenda, but certainly not in terms of an \$8-billion impact.

**Mr Kwinter:** Have you had a chance to take a look at the Ernst and Young report that was commissioned by the board after they took their decision?

**Mr Eliesen:** No, the only documents I was sent were the IIPA and the recovery proposal to the board of directors.

**Mr Kwinter:** Just for your information, we have a copy of this report that was provided to us by Hydro in which Ernst and Young took a look at all the aspects of the recovery plan and pointed out — we're going to be discussing this later on with the representatives of Hydro — what they thought were some of the shortcomings in the process that led up to this decision. Again with your experience as a chairman of Ontario Hydro, would you not expect that under normal circumstances that kind of report or reports similar to it would be done before the decision was taken as opposed to after the decision was taken?

**Mr Eliesen:** Mr Kwinter, I would agree with your observations. The implications of, for example, taking seven reactors out of operation and the impact on system planning — this isn't something you simply put into a computer model and in the next three or four minutes you have the results. This has grave consequences for the entire system, the integrated system. You take out the nuclear units and you put in, for example, the coal units which are in the southern part of the province, away from the Bruce and certainly remote from Pickering, and as well, if I recall, Lambton, which is an oil-generated station which is up north, there's an incredible analysis that goes into the whole transmission and integration of that system to ensure there are no bottlenecks, because you know where the power is being consumed and basically you've got to get it from where it's being generated to the source of consumption. That's not something you can do in a quick period of time.

That kind of analysis certainly takes a lot of time and it would have to be undertaken before any decision for expenditure.

**Mr Laughren:** Welcome back to Ontario. If the Hydro folks felt there was a serious problem in the nuclear division, which they did, if they didn't go to Mr Andognini, is there anybody of his comparable background in Canada who could have done that study that you know of?

**Mr Eliesen:** There are many people, Mr Laughren, I'm aware of who could have undertaken a study. The only question I ask is, from my knowledge, the problems have been well documented in internal Ontario Hydro reports. Quite a number of them have been made public over the years. The AECB publicly releases its information. All of the main problems and areas, people have known for some time. If it's a question of doing further study, then there are many Canadian consultants who could have undertaken that, but in my understanding in this case the very same consultants who have done this study are also running the system. The only question I would ask is: Why don't they simply run and improve the system as opposed to summarizing what has taken place in the past?

1430

**Mr Laughren:** I think the feeling that they had, that they expressed, was that — members will correct me if my memory is wrong — they didn't want it to be a hit-and-run kind of thing, that the people who made the recommendations for change would also be here to make sure they happened, as opposed to just sending a consultant in to make recommendations and then leave town. I think that was the thinking behind it.

You made reference to a self-defeating human relations policy, and I didn't know what you meant. Did you mean now?

**Mr Eliesen:** No. I meant specifically, and you don't have to be a rocket scientist to figure it out, because we have seen the same kind of experiences in the private sector. When you downsize, restructure, eliminate in a very short period of time such a significant amount of the human capital of any organization, be it private or public, you are going to have serious problems. You are going to have problems of morale. You are going to have problems in productivity, work performance, and more specifically, decision-making.

In this case, in Ontario Hydro, it wasn't one kind of hit; it was a kind of constant elimination of people. I know very specifically, because I hired some of them when I was at BC Hydro. They were competent, able people who were provided with attractive buyout packages and decided to take them. In addition, they decided to come out to the west coast, maybe for other reasons as well. That kind of policy, over the long run, is self-defeating. That's what I referred to.

**Mr Laughren:** You see, I can recall when that restructuring started and the downsizing started, and it was my understanding, my impression at that time that that was because there was a moratorium on nuclear development, no new plants would be built, and therefore Hydro didn't need this very substantial construction division and

that's where the numbers would come from. I don't have in my files a letter that tells me that, but that was the sense I got, and that it would not impact on the nuclear division. That was my sense when that restructuring was begun.

**Mr Eliesen:** The design and construction area, which is an area I had started to move in, in the latter months, because we weren't going to build any more nuclear plants, clearly was an area where people were going to be reallocated to other jurisdictions within Ontario Hydro, but if there is no overall corporate focus or standards and you're basically decentralizing, then the left hand doesn't know from the right hand what is taking place.

I can recall specifically following the meeting with Mr Lévesque — I'm now refreshing my memory after seeing the note that was tabled with you and it took place on November 4; our board meeting took place on November 11 and if you haven't been supplied, I'm sure it's there in the minutes from Ontario Hydro — we had a special discussion, because I reported my results with Mr Lévesque to the board.

We had a new reorganization with Mr Holt, who was the chief operating officer. We had Mr Niitenberg, who was the senior vice-president responsible for operations, and we had Mr Elgin Horton, who was responsible for nuclear, with his brother, who was the vice-president responsible for human resources. It was important that there be a collectivity of the centre involved providing the kind of support the nuclear people could operate under. What has taken place, I believe, is not only did a large chunk of the central core people disappear, but also some of the people that were in the line operations and some of the tradespeople who had been involved in the running of the nuclear plants as well.

**Mr Laughren:** You made reference to the meeting with Mr Lévesque. That was your first meeting with the AECB, in October?

**Mr Eliesen:** That is correct, October 7.

**Mr Laughren:** Did he give you some bad news?

**Mr Eliesen:** As I referred to earlier, he gave me good news and bad news. He tabled with me a staff report on what had taken place the previous period, and as I mentioned earlier there had been some modest improvement, on which he wanted to congratulate Ontario Hydro, but he still felt very strongly, and so did his staff, that there were just too many deficiencies. What was troubling him was that not only some of the older plants but Darlington was starting to exhibit some of the same characteristics the A plants had. That was a major concern to him.

**Mr Laughren:** Is that more or less what you reported to the Hydro board?

**Mr Eliesen:** Yes, I did. I attempted to correct or to continue basically the improvement that had taken place over the previous two years. We added somewhere in the order of over 500 more nuclear workers to assist in preventive maintenance and in terms of the operation. The reason I remember those figures is because we had to go each year, particularly when there were rate increases, to the Ontario Energy Board. Every intervenor there, including the OEB as well as OEB staff, criticized us exten-

sively for increasing the staff at the nuclear division at that time, but we felt it important to ensure there wasn't a lack of human resources available to work on the problems identified by the AECB.

**Mr O'Toole:** Thank you very much for your presentation. Just picking up on a few things that have been said, you expressed some discomfort with downsizing a crown corporation and you made a comparison to the private sector. Under what kind of motives do you think any organization should examine alternative ways of achieving the same goal?

**Mr Eliesen:** The primary motivation relates obviously to the economics of the time — I think we are talking here of what people in Canada and particularly people in Ontario went through, which was probably the worst downturn since the Depression — and was to cut and to cut significantly. The kind of cutting that took place impacts not only the problems of perhaps trying to grow in the future, but also dealing with the customer base you have at the time.

While I appreciate, and in fact as I identified in my opening remarks, it's not that my board and myself were not involved in cost control, because everyone was involved in cost control, it is important to identify that eliminating human capital is self-defeating over the longer term. I think the experience of many, many private sector firms, as well as those in the public, reflect the reality today.

**Mr O'Toole:** I guess that's a point of view.

**Mr Eliesen:** Indeed.

**Mr O'Toole:** I don't particularly support that, but I think you either survive or you meet your demise, so we have different opinions. You would have some disagreement then, I guess, with Mr Strong's approach. As Mr Laughren has said, the expectation I'm sure of the board and others was that they were going to really go out of the design-build mode to the operate-maintain mode. He had a significant downsizing, some 8,000 to 10,000 people. Do you think he did the right thing the right way, or was that clearly a mandate? As you shook hands leaving, was that kind of process starting?

**Mr Eliesen:** No, sir. The only thing I had started on, and actually had been complimented on by the Ontario Energy Board, was removing some of the overheads and identifying those areas within Ontario Hydro. I mentioned the design and engineering, where we were not going to build new plants. We started the elimination of positions in that area. No, in terms of running the entire system and the comparisons I have seen in running a nuclear system in Canada compared to other jurisdictions, as well as the thermal and hydro, we were cost-competitive and the human resources were required to operate the system.

The bottom line for me was, when I travelled in the United States or in Europe or in Japan, electricity prices there were two, three, four, five times as high as they were in Ontario. Even though you paid, let's say, four or five times as much, those jurisdictions were experiencing brownouts and blackouts, which has not been the pattern



one saw in Ontario. I thought Ontario Hydro had been doing a good job.

1440

**Mr O'Toole:** It could be argued they had excess supply to start with, I suppose, but I want to get on to another question. In your view, who controls Ontario Hydro? Is it the board? Is it AECB? Is it OEB? Is it the minister? All I see is it's just like blowing up a huge balloon. A point of maximizing return, I suppose: The debt exceeds by double the asset base. There's a huge problem here. I know we need to be safe and all these various things. They're right up on the goals and objectives of the board of directors, I'm sure. But you said cost-effective, sustainable, those kinds of things. Who runs Ontario Hydro? How do we get where we are?

I, as a citizen, a taxpayer, know — you do too, better than I do — that somebody's going to pick up a bill here for about \$15 billion. That's the problem. We can talk here for a hundred years. It's about \$12 billion. Just read their annual report. I'd say it's an organization out of control personally. I know it's nuclear and you should never say it, but my view is it's been very poorly managed for decades. Who runs it? Who is really responsible, you or the board of directors? I heard them say they make \$8-billion decisions in an afternoon.

I'm uncomfortable as a taxpayer. I really am. I think the Macdonald report looked at, how do you get this octopus in control here? Does AECB have a role? Can the Ontario Energy Board set rates? Who has control? Nobody, right?

**Mr Eliesen:** I'm trying to understand the specific question: Who has control? The Power Corporation Act sets out the specific responsibilities. The responsible government appoints the chairman and CEO, as well as the board of directors who are given the fiduciary responsibility under the power act. Other players you have mentioned are involved in Ontario Hydro's activities to the degree that, if there's a rate increase, then there's an independent process under which that proposed rate increase is reviewed in a public forum, and another body of appointed people, upon having public input, decide whether the request put forward by Hydro is acceptable or rejected or whatnot. The government is always there as a last resort. In my experience, any expenditure, for example, of \$1 billion would have to receive the concurrence of the government of the day. Certainly that's been my experience.

There are a number of public bodies and agencies which impact on Ontario Hydro's activities, but I go back to the bottom line: Ontario Hydro has served this province exceptionally well. If you want to pay the electricity prices they do in New York or Los Angeles or Tokyo or Paris, then you can pay two or three or four times as much. I've been travelling in the last four years in the Asia-Pacific countries, which are experiencing tremendous brownouts and blackouts. There they pay for electricity far more than we do here in Ontario.

I take a look at the comparative performance for a province which has not had indigenous, natural resources like falling water found in Quebec or Manitoba or BC. I

believe the people who started Ontario Hydro did a good job for the citizens of Ontario and still continue that today. I'm a firm believer in public power.

**Mr O'Toole:** Yes, that's clear. Ms Johns had a question.

**Mrs Johns:** You were there from September 1991 till —

**Mr Eliesen:** No, I became chairman in May-June of 1991 until the end of October 1992, for about 18 months.

**Mrs Johns:** I have done a clip search of your illustrious career at Hydro. I start out with "Rae's Choice to Run Hydro Asks \$400,000," which met some outrage from the Energy Probe group; "Tories slam NDP Hydro Coverup," and I guess that was when Holt was fired; "Fired Hydro Pres Ready to Tell All." The next one is, "Is Ontario Hydro in a Death Spiral?"

One of the things we've been looking at over the time frame is that it seems in most cases the chairmanship has turned over fairly quickly. It's my understanding that they had nine chairpeople in 20 years, when most businesses with strategic long-term planning might have — for example, GE has had the same chairman for 20 years, with some strategic planning. You had a five-year contract. Can you tell us why you left after a year and a half?

**Mr Eliesen:** If you did your search on your newspaper clippings, the answer would have been provided. At the time I left Ontario Hydro, I left for personal reasons. I had been offered, and there's a public statement to that effect, an opportunity to be the chief executive officer of British Columbia Hydro. I had lived and worked on the coast and this provided an opportunity for me to return. It was a personal decision on my behalf to leave at that time. I was quite proud then, and I'm still proud now, of the accomplishments in the 18-month period I was associated with Ontario Hydro.

**Mrs Johns:** When you left, the next person in was Maurice Strong. In a clipping I have from March 1993, which is not very long after you left in October 1992, he says, "'The new Ontario Hydro must be on the leading edge of change and not simply caught up in its backwash as it's been presently.' His tough actions were greeted by applause from Premier Bob Rae's NDP government, both opposition parties and traditional critics of Hydro." That implies to me they didn't think you had maybe pushed hard enough to get Ontario Hydro on the leading edge.

I know you've said you don't agree with what they're doing today, but do you think Hydro was pushing on the leading edge from 1991 to 1992? We had cost overruns. We had a president who got turfed when he was in Spain, I guess. Are we trying here to try and get control of an organization that's out of control?

**Mr Laughren:** It wouldn't have mattered where he was.

**Mrs Johns:** Obviously not.

**Mr Eliesen:** I'm sorry, I may have to ask you to repeat your question.

**Mrs Johns:** The question is, I think the organization was out of control when you were there too. Try and convince me it wasn't.

**Mr Eliesen:** I can easily refer to one source which may give you a little bit of comfort. That's the Ontario Energy Board. The Ontario Energy Board does a very detailed review of Ontario Hydro, particularly when a rate application is made. I have one of the massive documents in front of me now. If you read the transcript of all the interventions by Energy Probe, by AMPCO, by the MEA and others, plus the participation by the staff, you will get an appreciation of all the areas where Ontario Hydro has been thoroughly analysed and evaluated.

Clearly that's an adversarial forum and Hydro responds and then there is a judgement expressed by the regulators. The observations that were made, certainly during my term, were quite positive. They applauded my efforts on eliminating the adversarial confrontation between labour and management which resulted in a very successful two-year contract with rate increases of 1% in wages in the first year and 2% in the second year. They applauded my efforts on the cost control and they acknowledged that most of the rate increase that was coming in was a direct result of the operation of the Darlington nuclear station. In summary, notwithstanding I was only there for 18 months, I'm quite satisfied with the work I was able to do during that period of time.

1450

**Mr Kwinter:** Notwithstanding that you feel the IIPA report does a disservice to the people of the Hydro community, undermines the citizens' view of Hydro, I don't think anyone has come forward and disagreed with the basic thrust of the IIPA. This has been confirmed by AECB and others. Would you agree with that?

**Mr Eliesen:** Yes, except that my whole point is, what's new? I was trying to fully understand. If problems are already known and identified, then what is the purpose at a certain, particular time to come out with a report which, in my judgement, is American in terms of methodology, which does not have a direct application to Ontario Hydro in terms of its integrated electrical system?

The IIPA follows the American methodology in that it only lists the deficiencies. It doesn't provide a historical context. It doesn't provide any context. It doesn't say what's positive or what's happening at various of the stations, some good, some bad, some terrible. It only lists the deficiencies, and the question I ask, which again I ask, is why does this report come out at this particular time? The only answer is that I believe there were other agendas that are operating.

**Mr Kwinter:** You've anticipated my question.

**Mr Eliesen:** Okay.

**Mr Kwinter:** The reason I was asking is that the problems were identified over a period of years. Kupcis brought in Andognini to quantify the problems. We get the problem, and my feeling is that there was no real reason to precipitate a crisis. There's no question the problems had to be addressed. What do you think this other agenda is or other agendas are?

**Mr Eliesen:** First of all, I would agree with your observations. I don't believe I'm letting the cat out of the bag, but I believe the other agenda is quite frankly related

to the privatization of Ontario Hydro. I think the previous two chairmen had an agenda with regard to their view that Ontario Hydro should no longer be a public institution. I believe it was inappropriate for both Mr Farlinger, whom I do not know, and Mr Strong, whom I do know and I have a large amount of respect for what he's done in the international environment area, but I disagree quite strongly with their privatization efforts. If both these gentlemen wanted to pursue this, they should leave the position which they've been given in trust as a public institution.

**Mr Laughren:** I find it strange that the most spirited defence of this public institution in Ontario comes from a British Columbia resident because there's no doubt, Mr Eliesen, that there is an agenda here, absolutely.

About a year or so ago, if people will correct me on my timing, the government tried to dump some members of the Hydro board. They fired them before the term was up and the courts overruled that and said no, there was not cause and they had to stay on, and Mr Farlinger was appointed the chair of course. I don't think there's any question that there's an agenda here and it really is "get Hydro" time in Ontario. There's absolutely no doubt about that. Deputant after deputant has come before this committee and made that clear. Now, they've got a lot of material supporting them and this is what makes it difficult for those of us who believe in public power at cost, which you don't get in the private sector.

What's bothering me —

*Interjection.*

**Mr Laughren:** The cheap shots can come later when I'm finished. What's bothering me is that all of the material that's coming forward substantiates the need for reform at Ontario Hydro Nuclear. Everything seems to point to the fact that it hasn't been handled well and that they'd better get their act together. For the AECB to come within an eyelash of closing down Pickering, it seems to me, is serious and we do have to get it on track.

At this point in history, what would you do differently than what Hydro is doing now, including the Andognini report and so forth? The public needs to be reassured about the nuclear division at Hydro and I think they have a right to be reassured. You'd like to think that both Andognini and what he recommends to the board will go partway to reassuring the public that we're getting back on track with Hydro, but I'm nervous that the exact opposite could be the case, the way people are coming before this committee.

**The Chair:** Thank you, Mr Laughren.

**Mr Laughren:** I just wanted a quick response from Mr Eliesen.

**The Chair:** Very quickly then, please.

**Mr Eliesen:** The only quick response I can give you is that many of the people who were let go during that period of time are obviously the trained, qualified people who should be returning to assist in improving the nuclear system.

**Mrs Fisher:** You were there from 1991 to 1992. My understanding is Darlington was commissioned during that period of time.



**Mr Eliesen:** Commissioned to be in operation?

**Mr Fisher:** Yes.

**Mr Eliesen:** It was thought to come into operation in the late 1980s, and 1988.

**Mr Fisher:** When did it come on is what I'm asking.

**Mr Eliesen:** It came in, yes, during 1991-92.

**Mrs Fisher:** When you were there?

**Mr Eliesen:** That's correct.

**Mrs Fisher:** I find it amazing that today you have all the answers because I started following Ontario Hydro very closely in the mid-1980s and followed the history of what was happening at the same time. Let me ask you this question. How many OEB rate hearings did you go through when you were chair?

**Mr Eliesen:** There were two.

**Mrs Fisher:** Two during the course of your tenure?

**Mr Eliesen:** That's correct.

**Mrs Fisher:** How many recommendations were made to you as chair of the board from the OEB at that time?

**Mr Eliesen:** I haven't counted the number, but there were quite a number of recommendations in each annual report and there is a response from Hydro at the time, and many of the recommendations were followed.

**Mrs Fisher:** How many weren't? Because it seems to be a trait, and it seems to be that the recorded trait is that those who come before us now not only did a good job, had all the answers, but also are now recommending to this panel that OEB be the respondent.

Earlier in your deliberations you talked about perhaps the OEB should be the external party to review this thing. I find that rare because in your position the OEB was the unbiased party that was making recommendations to Hydro and I would be very curious and I would like to see on record, please, during this tenure how many recommendations were made. I know we have that record somewhere because I asked for it previously. I just don't have it available because I can't carry everything around any more. But I know that there were a number of recommendations made and I'd like to see the success in terms of implementation.

**Mr Laughren:** You have to go back a lot further than that.

**Mrs Fisher:** I agree. We do have it on record from a number of years back.

I want to ask one more question. The crux of the IIPA report right now is the human resource issue. I heard you defend, and somewhat rightly so, I guess, the past practices of the staff, certainly in that situation, but some poor management decision-making, and I believe management starts on the 19th floor over there. It certainly has in my 20 years of observing Hydro. Let me ask you this: If the commissioning of Darlington came on in 1991, which was in your tenure, how many of those construction engineering staff did you lay off and how many of the new breed that we needed for operating status did you hire?

**Mr Eliesen:** Well, Ms Fisher, it's all in the OEB report.

**Mrs Fisher:** I'm asking you.

**Mr Eliesen:** I can give you the actual numbers. On page 86, where it shows the staff changes by branch, the nuclear went up, first of all, from 1991 to 1992 by 414 and that —

**Mrs Fisher:** Please just concentrate on the engineering side of it.

**Mr Eliesen:** All right. On the design and construction, which I believe is the area you're concerned about, there were 498 positions that were removed in 1991-92 and 104 in 1992-93.

**Mrs Fisher:** How many were replaced?

**Mr Eliesen:** As I mentioned earlier, that relates to the specific fact that Ontario Hydro was no longer going to be in the business of building nuclear stations.

**Mrs Fisher:** Which I appreciate. If Mr Andognini is right in his analysis that the philosophies or the mentality didn't switch from construction and move over to operating, I guess what he's also telling us then is nor did the skills of those people doing the jobs. What I was trying to hone in on was, you're saying that in 1991-92 and 1992-93 about 602 people were laid off in terms of engineering staff, or were they transferred into operations?

**Mr Eliesen:** They were transferred. I don't believe there were any specific layoffs. We eliminated positions in those areas.

**Mrs Fisher:** Would you agree that today that might be part of the problem?

**Mr Eliesen:** Oh, absolutely. I guess that's been the thrust or one of my main points. When I referred to a self-defeating human resource policy, the removal of so many people over quite a number of years contributed to the low working performance, to the low productivity, to the morale and to the decision-making process that was taking place within Hydro, absolutely.

1500

**Mrs Fisher:** If I could just make one fast point?

**The Chair:** Only if you do it very quickly. I've already allowed you some extra time.

**Mrs Fisher:** I would think this might be the turning point as to when the philosophy change didn't turn because if Mr Andognini is right, in fact, in going from construction to an operating maintenance mode, that is the time that should have been taken care of, and I think we're paying the price today.

**The Chair:** That concludes that part of the questioning, Mrs Fisher.

I want to ask the members of the committee: We are pleased that Mr Eliesen has attended upon the committee from a distance, and it may be appropriate if members of the committee would like to continue for another round. I'm at your disposal. Another round of questioning, or would you wish to bring it to a conclusion now? Are we satisfied? We are satisfied. All right.

I just have two small questions, Mr Eliesen, before you leave the witness stand, if you don't mind. I am bemused in a very strange way by evidence that has been given to this committee by a number of former chairmen. You'll forgive me because I'm just a simple fellow trying to figure out where the truth lies and who sees what and

where. Mr Strong, in his evidence, thinks not very highly of all the chairmen who have gone before. You have given the impression that perhaps Mr Strong needs to hie himself to a nunnery, or some other equivalency, for some personal reflection as well.

You will understand that there is a concern I have in, where does the truth lie? Each of you is kind of pointing the finger at the other, not nastily, not unkindly, but both saying, "I think you've really made a mistake there," and he's saying, "You made a mistake." Can you shed any thoughts on it that might be as unbiased as you could possibly make them?

**Mr Eliesen:** Clearly we're all human beings and we reflect different points of view, and that's quite healthy in a democracy, I'm told.

**The Chair:** Except the taxpayers wind up paying, so I'm concerned about it —

**Mr Eliesen:** Let me try to address your question. In general, Mr Franklin, who I followed, I have a lot of respect and admiration for what he did during that period of time. I think there's a lack of appreciation of the impact a manager is asked to bring in the public sector in the provision not only of electricity, but also to act as a responsible public citizen to the region, to the community and to the province as a whole. Ontario Hydro has played that role and has played it admirably over the years.

When people criticized Darlington — and I was one of the ones, because I'm not in favour of nuclear power. I've always promoted energy conservation because it is the cheapest method of generating electricity; notwithstanding, the fact is you've got a nuclear system. The idea is to make it run as well as possible. These people worked exceptionally hard and worked quite diligently in the interests of the people of Ontario.

I would ask committee members to remember the bottom line, and the bottom line is, is it broke? Are electricity prices such in Ontario today that it's two or three or five or 10 times more than in other places and really affects the competitiveness of people here, and are you experiencing serious brownouts and blackouts such that the whole reliability and stability of the electricity system is in dire straits? I would argue with you that is not the case.

I believe Ontario Hydro is not getting the kind of defence it should be getting as a result of these hearings. I think there has been a deliberate effort to undermine public confidence in the public institution. If I'm expressing myself a little bit more passionately than perhaps those who have preceded me here, it's because I believe quite positively that Ontario Hydro has served the people of Ontario quite well.

**The Chair:** The \$32 billion then, the debt itself, is not a cause of undue concern for you.

**Mr Eliesen:** No, sir, it is a cause of concern.

**The Chair:** All right.

**Mr Eliesen:** But let me answer your question comprehensively. People always have a tendency to look at the debt side; they never look at the asset side. Probably Niagara Falls is listed on book; that is, the book value of Niagara Falls and the generating station is probably

\$100,000. You try to replace Niagara Falls. The replacement costs would run into billions of dollars. If anyone did a proper accounting of the assets and liabilities of Ontario Hydro, you will find the assets far exceed the debts of Ontario Hydro. Ontario Hydro is not going to go broke. The assets are worth more than the debts.

**The Chair:** You are really of that opinion.

**Mr Eliesen:** Well, sir, I've seen studies —

**The Chair:** You are of the opinion that the assets far exceed the liabilities?

**Mr Eliesen:** Absolutely.

**The Chair:** Based upon what information?

**Mr Eliesen:** During my tenure I saw studies done internally on replacement value of the Hydro facilities in particular, which were worth five or six or seven times more than the value on their books, and that could only be enhanced in value as time goes on. These things depreciate over 50 or 60 years. They last 100 years. The opportunity costs of trying to develop another alternative — for example, a hydro station — in this generation becomes far more valuable as time goes on. That's rarely taken into account in the analysis of the balance sheet.

**The Chair:** A final question, because you've wandered into an area that's of more than a little interest to me, the area, for example, of stranded assets. Do you want to respond to that?

**Mr Eliesen:** "Stranded assets" is a term that only became relevant —

**The Chair:** I'm sorry, stranded debt.

**Mr Eliesen:** Okay. There are stranded debts and stranded assets.

**The Chair:** That's right, and I've decided to choose debt instead.

**Mr Eliesen:** "Stranded debt" only became a focus when people started to talk about deregulation. When you had a public monopoly, or a private monopoly for that matter, which was regulated and served the people, there wasn't a question of whether it was stranded or not; it was going to continue to serve the people of Ontario. Once you started talking about a new scenario in the future where private people are going to be allowed to participate, then obviously the question of stranded debt becomes relative, but no more, no less than what you hear in the United States because they are private companies, not public. Private companies have the same kind of —

**The Chair:** Is it not true that in whatever cheery picture you paint of assets and liabilities, in fact in the final analysis the health of Ontario Hydro depends upon the government of Ontario?

**Mr Eliesen:** There's no question. Darlington would never have been built if the government of Ontario had not made the decision to build Darlington.

**The Chair:** Okay. Thank you very much.

**Mr Galt:** On a point of order, Mr Chair: With the delegate leaving, I'm very concerned about one figure that came out suggesting that the Niagara Falls project is only worth \$100,000 on the books. I think we need, through our counsel, to chase that down and get some real figures on what the value of Ontario Hydro's properties really is. As



to \$100,000, I can't even believe it was worth that little bit back at the turn of the century.

**The Chair:** Let me just ask our consultant.

**Mr Rick Campbell:** Subsequent to Mr Eliesen's tenure, Mr Strong did an evaluation of the assets on Hydro's books. I think part of his testimony was some appreciation in the value of hydro-electric and other assets, what in fact offsets the depreciation of the nuclear assets as you approach a competitive market. I think there would be in Hydro's annual reports, or studies available anyway, that which indicates the true value in the marketplace of some of the hydro-electric assets.

**Mr Galt:** We need some figures, what a willing buyer would purchase from a willing seller, and get those on the books because I can't believe that would be \$100,000.

**Mrs Johns:** He's talking about market. It's a very different thing from a willing buyer.

**The Chair:** Yes. As opposed to the willing buyer. That's right. Thank you very much. We'll make a note of that and we'll deal with that. Any other comments before we close off? No other caucus with any comments. Mr Eliesen, thank you so much for your presentation. We appreciate your long journey and we hope your return back to British Columbia is safe and uneventful.

**Mr Eliesen:** Thank you very much, Mr Chairman, and ladies and gentlemen.

1510

#### ONTARIO HYDRO

(continued)

**The Chair:** We are going to return to the agenda of this morning. When I resume the questioning it will begin with Mr Laughren, if the Ontario Hydro witnesses would please resume the stand. As we are preparing, let me remind the committee that we have one more round of questioning, beginning with Mr Laughren, and that will then conclude section 1. We'll then move into section 2.

I will ask us to be very disciplined in terms of our questioning on 2 and 3 so we can try to keep on schedule for the day. Welcome back to the committee. I'll begin with Mr Laughren.

**Mr Laughren:** We've just had the remarkable experience of having a former chairman of Hydro give a spirited defence of an institution built by Tories and run by Tories for most of this century. It was quite a remarkable performance, although he did question the building of Darlington, I must say.

I want to return to the Ernst and Young report. I believe you've seen a summary of that, I think you indicated this morning.

**Mr Machon:** Yes.

**Mr Laughren:** It seems to me that Ernst and Young had more time and more expertise, with all due respect to the Hydro board, to look at the proposals of Andognini and you than did the Hydro board. The Hydro board, who I would assume are people who understand their own capacities or lack thereof, just in one afternoon approved

this massive restructuring plan or recovery plan for the nuclear division — truly remarkable.

Ernst and Young, who took more time and, as I say, I'm sure were able to have some expertise — don't forget, Mr Farlinger came from there; they must be a good company, right? Well, those are my words. It seems to me that some of us are very sceptical of what's gone on here, particularly surrounding that board meeting. When I look at the executive summary — well, it's not just an executive summary, but they've put it —

**Mr Machon:** That's the report that was presented at the September 9 meeting.

**Mr Laughren:** No, this is Ernst and Young's analysis of the nuclear asset optimization plan.

**Mr Machon:** What's the date on that?

**Mr Laughren:** It's dated September 7.

**Mr Machon:** Yes. That was after the board meeting and presented at the September 9 meeting.

**Mr Laughren:** Correct; sorry. It was certainly done after the August 12 meeting. Yes, you're absolutely correct.

What's bothering me a lot is that the Hydro board approved what you folks brought to them without a lot of angst, it seems to me, although there were some questions. When Ernst and Young look at it, they raise a myriad of questions, much more than the Hydro board did. I'm wondering how you feel about the Ernst and Young report and its very critical analysis of your recovery plan.

**Mr Machon:** I'm going to keep my focus on the nuclear case as we go through it.

**Mr Laughren:** That's all right. So am I.

**Mr Machon:** As we translate it, the action that came out to us was the need to formally document the bases we went through when we considered the nuclear options in the generation of the plan, beyond the presentation that we made to the board, which we did. That was presented at the September 9 meeting, as well as some more clarification around the work. I believe that was the main emphasis with regard to the nuclear plan. There were some comments in there about conversion rates that were used. I'm trying to remember now the exact findings in there as we looked at some benchmarking activities versus what we saw.

Fundamentally, nuclear had provided the responses to that relatively quickly. The review they did was from a financial aspect, from costing, basis of the cost, reasonableness and the moneys used. There was little challenge, if you will, on the technical bases of the nuclear recommendations in that plan, and we responded to all of those in the September 9 meeting.

**Mr Laughren:** You've responded to all of Ernst and Young's concerns?

**Mr Machon:** I believe there were six and I believe, if I remember — I'm going from memory and the summary page — we had fundamentally to provide a bases document, which we did, for the decision-making process between the cases, and I believe you have a copy of that, and to do some correction with regard to conversion rates, which we did.

**Mr Laughren:** This is what's bothering me: "Corporate and Genco's" — that's the generating division of Hydro, right? — "response to the recovery plan," the NAOP, "requires a more rigorous financial analysis of supply options, particularly in respect of uncertainties associated with the A units not returning to service at the scheduled time." How did you respond to that?

**Mr Machon:** I believe Pat will be responding to that when it comes up.

**Mr Laughren:** Okay. Do you want to wait until —

**Mr Machon:** Yes. That's out into the future, if you will, the 1999-2000 time frame.

**Mr Laughren:** One of the other issues is the lack of consistency in the assumptions that were used. They've used that term more than once in their report. It's too technical for me so I need some help on it. They say: "There were inconsistent assumptions used throughout the option analysis and there was limited documentation. Where inconsistent assumptions were discovered, they did not appear to materially affect the financial estimates; however, they may reduce the perceived credibility of management's analysis."

**Mr Machon:** I think that inconsistency was the bridge across from some of the nuclear bases into the Genco bases, and I believe that was cleaned up, if you will, between the time. I don't think there was anything material that would change the materiality of the recommendation in that process.

**Mrs Fisher:** I don't even know where to start, to be honest with you. I've waited about a month now to get to this point of moving forward with this report. I'll start by saying that I am the member for the riding of Bruce. I think that clears up some things as to what I might be coming at here. Some will say that I should be more general, but general questions, as far as I'm concerned, have been well handled by others here.

I don't even know where to start. I'll start with this: Coming back to what Mr Laughren was just talking about, the Ernst and Young report, I know there has been a copy provided to the executive office at least, and probably the board, since it's been written. Out of the executive summary — I can't take the time to do what I need to do here perfectly, but I'll do my very best — there are comments like this: "Potential options were not documented in a manner that adequately supports the selection of the NAOP option"; "substantiation of key financial planning assumptions were not sufficiently documented"; "inconsistent assumptions used throughout the NAOP option analysis"; "NAOP is based on key assumptions around labour issues, productivity improvements"; "general weakness in the integration of information."

I worry a little bit about the time it took Ernst and Young to do it as well, since it went from August 27 to September 5, which doesn't sound very long to me given the magnitude of the issue.

Then we get into, "The NPAG made several key assumptions that resulted in selection of NAOP options over the possible alternatives," which I personally don't feel are varied enough yet. It includes, "The inability to train

personnel, uniform best-practice performance, lack of internal human resources."

However, it then goes on to say, "There were several key assumptions impacting that decision: fossil units, which can meet required production levels; management of emissions; external regulatory requirements; and alternate fuel availability." That isn't even taken into consideration if you look at the long-term lay-up of the two As if that were to happen. I know some of that will come from finance.

I'm just setting the stage for where I want to get to with this. Having said that, those have been my concerns, without having the Ernst report before me, since August 29 when I wrote Mr Andognini myself as a result of the August 13 report.

I want to go back to something we left with Mr Eliesen, who was just here, and it goes back to this issue of human resource planning. I personally believe, and I haven't heard anybody dispute, that there are qualified people sitting in Ontario today who would like to become nuclear operators, nuclear control techs and nuclear maintainers again who were inappropriately bought out in the 1993 year. I think we should be chasing that market first. I was presented with an ad from the Toronto Star, but circulated in the States as well over the past week. I think we are not paying enough attention to that issue.

I'm making these points because I don't know how else to get the question out in the end.

When I was an employee of Ontario Hydro, I was very familiar with engineering change rules, proposed changes, external work orders, deficiency reports, and everything that still exists there today. It seemed me in those days, anyway, that there was adequate engineering staff on. In 1993 we were told that the ratio of tradespersons on the floor, if you will, to those of engineering staff was inappropriate and that there needed to be some levelling out of that engineering thing. I'm hearing now "more engineers and not enough staff." I don't get the picture.

**Mr Machon:** Let me try to work it backwards and see if we can get there. The issue with regard to the increased need for engineers at this point focuses primarily around reconstitution of the design basis and the configuration, going out and getting the drawings to reflect the plant, and the other issues I've mentioned which have been neglected — there are drawings being utilized right now that don't physically represent the plant — and that is a combination of engineering work: going out and walking down systems, taking critical dimensions, translating them back into the drawings. Once that effort is complete, you won't need all those engineers who were called out as part of the improvement initiative.

**Mrs Fisher:** Can I ask a question on that?

**Mr Machon:** Sure.

**Mrs Fisher:** I'm not so sure it takes an engineer to walk out and identify a valve and the serial number on it etc.

**Mr Machon:** No. But it does take an engineer to walk out and get critical dimensions or to analyse those critical dimensions when they come back.



**Mrs Fisher:** I won't disagree with you. I know it's too detailed. We're micro-talking here and maybe we shouldn't be. But somebody out there in this public has to understand the complexity of the problem, and I'm sure many do.

My concern is this: It's almost like a start-over scenario, and I don't personally believe we're in that situation today. I believe we're in a used car vehicle status and we are doing no differently from that. We're observing things — fractures, stress fractures, retube of reactor core issues — that were anticipated in some cases and in some cases not, that are fixable. I don't think it takes all the engineering staff you're talking about to do that. I think we're totally inadequately supplied with the hands-on staff, and even some of the construction forces, by the way, who were there in the past, who built it and were able to bring it up.

I want to talk a little bit about other impacts and options that, from my perspective, weren't considered.

**Mr Machon:** Could I go back to one of your issues there?

**Mrs Fisher:** Sure, as long as the Chair allows me the question.

**Mr Machon:** I think there's a question in there somehow and I'll try to answer it. We identified additionally — it's not just engineers. We have deficiencies in both control and mechanical maintenance techs as well. It's not just engineering. We're talking about bringing in control and maintenance techs as well.

You remember, as I went through that chart, I said that capital work, the work that is traditionally run by the building trades or the EPSCA trades, was not included in that number. If I were going to retube a condenser and it is not included in those numbers, I would bring in, under proj and lodge, the EPSCA trades to go ahead and do that task. So there is a need across the board.

**Mrs Fisher:** I agree with that, but on the operating side, as far as I'm concerned, there was a bad buyout. There are hundreds of millions of dollars invested in trained people sitting in Ontario today who I know would come back. If Hydro can't do the search, why don't they let somebody else do it for them? I am sure we can find those bodies for you, as opposed to going outside first. I take offence to having additional staff from outside come in when I think we have some in our backyard. I don't want to belabour this because —

**Mr Machon:** I agree with you, and that's our intention.

**Mrs Fisher:** We haven't been doing that. In the meantime, we're shutting down plants, including those in my backyard. We're not doing it. This announcement was made August 13. We're now at the end of October. We're shutting down as we speak. I don't see any initiative to reinstate what I've talked about for the past month and a half.

The second point I'll make is this: Zero economic impact was considered in the Bruce community when the decision was made as an option to shut us down. I think that's totally inappropriate. I guess tomorrow, while we

travel to Bruce, it's unfortunate that you're not on the panel and that those people who are doing the questions are different tomorrow. I think it would be very interesting to hear the considerations that weren't made there. I just note that as a highlight.

One other thing I'd like to talk about is this, and it has to do with the opportunities for options. I don't see where they're here. First of all, I applaud Mr Andognini's report in that it's assessed. I'm not technically expert enough to say whether it's perfect or not, but it seems to be an appropriate assessment of the situation today and I applaud the efforts that are being made. It's a significant change that's going to take place.

I do not agree for one second that appropriate options have been put before the board of directors of Ontario Hydro to make the reasonable decision it should be making. I do not agree with displacing units that, by AECB's confirmation here to us already, meet the approval process to continue operating with some remedial work that's able to be done. I understand there's a boiler tube problem at the Bruce site, for example, that's one third completed. One third at \$600 million per unit is a significant amount of money, and it's already there but it's not being talked about.

I also know there was an option put forward to introduce private equity into the refurbishing of the whole of the Bruce site. That wasn't, as best I can find in any literature I've been given so far, considered. I ask you if you think it would be appropriate for the panel to initiate action to provide adequate information for the board to make another decision.

**Mr Machon:** With regard to the whole generation picture?

**Mrs Fisher:** I'll speak for Pickering as well. People think I'm just here because of Bruce, but I've been attached to Hydro for 25 years and it started at Pickering. I think the whole picture. AECB was ready to bring up unit 4 at Pickering in December of this year. Instead, we're putting scrubbers into fossil fuel burns to accommodate the shortage of generation. We sat on 3,500 unused meg continuously for a number of years and all of a sudden we're in a short flow. I don't believe it's to that point. I think we should be able to manage the refurbishing forward of those plants that are able to run by AECB regulatory requirements.

AECB sat in the same seat you're sitting in and indicated to us that they were in a safe operating manner — maybe minimal standard, and maybe we need to do something on the human resource side to bring that up, as opposed to displacing the whole mess. I have yet to see those options, and I'm looking very, very hard for them, by the way. I'm not pretending to be the technical expert here, but nobody has provided me with enough understanding to help me agree with you that in fact the proposal you put forward is right. I personally don't believe it is.

**Mr Machon:** I guess we disagree.

**Mr Kwinter:** I'd like to pursue some of the areas that Mrs Fisher was just talking about. Prior to the August 12

meeting, where the IIPA report was received and the recovery plan was received and approved, the day before, the minister sent a letter to the chairman. In it he said, among other things, "You can appreciate that the government expects all options will be thoroughly evaluated and assessed by the board before decisions on a full recovery strategy are taken."

My reading of that is, "all options" is all options. I queried a couple of members of the board about what their interpretation was. They said that no, their interpretation was that all the options that were put forward in the recovery plan should be considered. That was their only charge, to take a look at the six options and make sure the recommendation, number 5 or possibly number 6, was the right one. That was their interpretation.

Earlier today I heard you say, as you go through and develop this recovery strategy, and you're still plumbing the depths of a problem, that there will be opportunities for you to look at some of these other options. Is that true?

**Mr Machon:** That's true. When you say "other options," do you mean a pair of units versus a four-pack or moving it up faster or any combination thereof?

**Mr Kwinter:** I thought I heard you say today that you might look at fossil fuels, you might look at gas generation, you might look at some of these other — these are other options that were there.

**Mr Machon:** Yes. Any nuclear option that we bring forward, whether it be to bring Pickering A back or Bruce A back, will have to stand on its own two feet next to another option, which could be combined-cycle gas, yes, with the business case.

**Mr Kwinter:** I have an executive summary of the meeting that took place on August 12. In it, it says that at its August 12, 1997, meeting, Ontario Hydro's board of directors received the IIPA report from the NPAG and related NAOP and approved a number of actions intended to allow the nuclear program to restore its performance to levels expected by Ontario Hydro. So the board has approved the nuclear option. There is a caveat with that, and we'll talk about it later on. Because questions were raised at the board of what the financial implications are, they want to know what these things are. But I haven't seen anywhere that they have mandated through the board that these other options can be explored.

1530

It seems to me that given the fact that they have approved the recovery report, which doesn't mention anything other than the nuclear options, there is no other provision — and I assume you're talking about allocating substantial amounts of money to putting forward this recovery plan. Surely you're not going to get partway down the line and say: "You know what? This recovery plan doesn't make any sense. We're going to have to take a look at whether it should be gas-generated energy, whether it be fossil fuels, buying fuel from somewhere else." I don't see where you have that flexibility under the direction you were given by the board.

**Mr Machon:** The plan we provided them with has key milestones in it as well to come forward with the business

cases for bringing back the A units, if you will, that need to stand on their own two feet when we bring it forward. They're slotted in at appropriate times to bring them to the board, at which point there will be another decision made regarding whether it's going to be the units at Pickering A or Bruce A versus another alternative to purchase, build, whatever the alternatives are at that point in time that will need to be considered as part of that business case. That's inherent within the plan.

**Mr Kwinter:** Does that mean no action is going to be taken until all this is developed?

**Mr Machon:** Correct. With regard to the recovery, we're going to lay them up, keep them in condition to be recoverable, and as we start to move down the path and performance improves, bring the business cases forward for the recovery.

**Mr Kwinter:** But the minute you start laying them up, you're going to have to get some alternative energy sources.

**Mr McNeil:** I'll talk to that, sir.

**Mr Machon:** Pat will talk about those.

**Mr Kwinter:** That is the point I'm making. It isn't as if you're saying: "We have presented this report. It's been approved in principle and now we have to really develop, fine-tune the proposal and nothing will be done until each particular business case is made." I'm saying what I think is happening is that the board has given you approval to proceed with the recovery plan as presented to it at the meeting of August 12. You now have the green light to go ahead, subject to the caveat that was raised by Mr Pollock and Ms Clitheroe that, "We want to see some of the financial impacts of this."

Notwithstanding that, you're going to lay up nine reactors, you're going to have to commit to alternative energy, and there are serious cost implications by doing that. I don't see how, further down the road, you have any flexibility to say: "You know what? Now that we've looked at all this, this isn't the way we should be going. Let's go another route." That's one of the problems that we have.

I took a look at the recovery plan of 1996, which was not that long ago. Here is this recovery plan that must have been developed at Hydro with a lot of input and a lot of cost, and one year later we're saying: "No, that doesn't meet our requirements. We're now going to this other recovery plan that has been brought in by the so-called Andognini group." There is a perception that there really isn't a direction, an overall program that has any sense of where they want to go. You're saying even now, "As we go along and as we develop these things and see the problems, we may have to look at some other alternatives." That may be unfair, but I'd like your comment on it.

**Mr Machon:** I need to keep the attention here that I'm talking about nuclear options with regard to the assets that are there and as we move forward with that. This effort, the tail end of this, if you will — like you said, once we got to the point where we could see that there was going to be less energy generated as a result of this option, it needed to be worked through with Genco to see what



alternatives we can pursue. We continue and will continue to have that relationship as we move forward to make sure the best alternative is taken. It may not necessarily be the nuclear alternative; it could be something else. Then again, it could be nuclear. We need to continually test that as we're moving forward beyond the 12 units.

Remember the first slide I showed, just bringing the 12 units up to where they should be. We have in effect been accepting operations without having the Bruce A units and a couple of the Pickering units regardless. If we just had them at the benchmark level, those units could have been shut down and the same generation would have been produced over the last years from 1992 to 1997 regardless. So just by bringing those units back up to performance, we'll be getting the same energy we've been getting for the last five or six years.

**Mr Kwinter:** Mr Machon, I have a little problem with our interchange. I would agree with everything you've said if this material had come forward to the board as an information item only and these various alternatives were going to be explored and decisions were going to be taken as a result of really modelling all these various alternatives and then coming to a decision. I would agree completely with what you've said. But that is not what has happened. The report came forward as an information item. It was changed to a decision item. The decision was taken. The minutes reflect that the board has approved the plan that was presented. I assume that subject to financial information to satisfy the chief financial officer and some of the members of the board, this is going to go ahead, and that is the nuclear option.

Once you make that commitment, there are some very significant aspects of that commitment: You're going to put nine reactors out of service and you're going to have to contract to get alternative supply. You're down that road. I don't see how, after having started down that road, you can suddenly say, "No, there are going to be benchmarks as we go along, and if we feel there's a better alternative, we can change direction." I can't quite comprehend how that works.

**Mr Machon:** When I'm talking about change in direction, I'm talking about a decision-making process around returning the A units to service, not about getting the 12 units we're talking about focusing on up to the performance levels we expect. That direction won't change. We're going to get those 12 units to where they should be performing. Yes, that one is cast in concrete; that's a mandate; that's a "Do it."

However, the return of the A units is going to be subject to substantiated business cases that are brought forward to the board.

**The Chair:** That concludes the questioning under section 1, the nuclear asset optimization plan. We are going to turn our attention, then, to section 2.

**Mrs Fisher:** Chair, before we proceed with that, may I make a request, please? For the good of the committee, I would ask that these three following pieces of information be provided. The first one is with regard to human resources. I would like an analysis of the key positions

required to keep the seven units up, as opposed to shutting them down.

I would like for somebody to identify how we could obtain those from the Canadian workforce to start with, and then outside. I understand that the CNA conference indicated to their membership there were 200 available nuclear workers in Britain today as a result of their restructuring. I know we have some here. I'm sure we have Americans and others. I'd like to see that, please — I don't like to be too unreasonable with this — obviously as soon as possible because things are happening that are irreversible if we keep going the way we're going. I don't know if tomorrow is possible on that. I know people have been studying staffing, but if it's possible for tomorrow, that's the first request.

The second request: There has been some determination that the 1,725 designated affected staff from the Bruce are going to be for the most part redeployed to Bruce B and Pickering B. I would like to see the comprehensive study showing us that there's some substantiation behind how and why that happened, who is to say that's where they need to be now, that type of thing, and why.

#### 1540

The third thing I would like is, on behalf of the committee, to ask for some type of technical report. There hasn't been a dry lay-up for a Candu system, to my knowledge, in history. I would like to see some type of technically supported document that shows not only the cost differences between that but the technical requirements as a result of that. I think all of those things are of extreme importance to this committee.

**The Chair:** We've noted your request and we'll ask that it be responded to with dispatch.

**Mr Machon:** With regard to the latter, you do understand the reason for the dry lay-up at Bruce versus the fuel lay-up at Pickering?

**Mrs Fisher:** I certainly do, sir, but I understand it's being done unit by unit.

**The Chair:** Mrs Fisher, you made a point and that's fair enough. I don't think we need to get into any side debates. We'll ask that Ontario Hydro provide that information as quickly as possible. I have no doubt that they will facilitate your request with all dispatch. I'm sure they will.

Let's turn our attention now to section 2, the Genco implications of the NAOP recommendations. There are three sections to that. We'll begin with the presentation.

**Mr McNeil:** Good afternoon. My name is Pat McNeil. I am vice-president of corporate planning for Ontario Hydro. I was appointed to that position in September this year. Prior to that, I was vice-president of strategic investment planning for the generation business. In that position I was responsible for assessing the impact of NAOP on Ontario Hydro's ability to meet customer demand and for developing an action plan to enable Ontario Hydro to continue to meet the province's electricity needs while maintaining the reliability, the minimization of cost and minimizing the environmental impacts.

What I'll be covering today are the impact that NAOP had on Ontario Hydro's power structure; the options that were identified in assessing and developing the action plan; the assumptions that were used in developing the assessment; the preliminary assessment of the cost and the environmental impacts of the action plan; and what we continue to do to further minimize cost and environmental impacts as we implement the plan.

Copies of my presentation were given out this morning, I believe, or they were given to the clerk this morning.

**The Chair:** That's this one right here?

**Mr McNeil:** That's right, sir.

**The Chair:** The Power System Implications of NAOP. I think we all have a copy of that on our desks.

**Mr McNeil:** Thank you. It will take me roughly 30 minutes to go through that presentation. I would like to point out that this is not exactly the presentation that was given to the board.

**The Chair:** How does it differ?

**Mr McNeil:** The board presentation was in much greater detail and took approximately an hour and a half to deliver. Given the 30-minute time frame, the numbers are the same, the themes are the same and the actions are the same.

**The Chair:** All right. For the purposes of our record, our presentation will be about 30 minutes. The board received a presentation that lasted an hour and a half?

**Mr McNeil:** From the time the presentation began till the end, yes.

**The Chair:** And it was in greater detail, more data and so forth?

**Mr McNeil:** Yes, sir. But the numbers will be in there, the themes are the same, so you'll have the same view the board had.

**The Chair:** Fair enough. Carry on, please.

**Mr McNeil:** First of all, I'd like the committee's indulgence. There are two concepts I would like to make sure there's clarity on before I begin. Again, I apologize if this presentation is at too high a level in this area.

First of all I'm going to use two terms: One is "capacity" and the second is "energy." The capacity requirement is the generation that is required to reliably meet peak customer demand at the high draw point of the year. For instance, in the 1998 winter, we're expecting a peak of roughly 20,000 megawatts. In addition to having that plant for 23,000 megawatts, we also have to plan to have a reserve margin above what the customer draw will be.

The planning reserve margin that we use in Ontario varies from 18% to 22%. On average, it's about 20%. So we have to have 20% additional plant one year away from the time the peak is going to occur. That reserve margin allows us to address three things: One is that the weather is never exactly what it is supposed to be. It's sometimes colder than you expect it to be and sometimes it's warmer. Colder in the winter peak is a situation we try to cover for.

The other thing is whether or not the load growth occurs. Load growth can vary, as we all know, and what we try to do is build some in the reserve margin in case the load grows bigger than what we thought it would grow at.

The third item we try to cover off is whether those resources we have available are actually there to be used the day we need them. When you're planning one year out, plants break down, so we try to make sure there's sufficient reserve margin so that the day we actually have to meet customer demand there are sufficient plants online. That deals with the "capacity" term.

The "energy" term, and I want to bring some clarity to this, is really the capacity that's used through time. It's the amount of energy that is consumed in the province throughout a fixed period of time. I'll be talking to the annual energy, which is the energy that's used in any year. So we have the capacity, which is used to meet peaks, and we have the energy demand, which is the draw 365 days a year on average. I just want to make sure the committee members are familiar with those two terms since I'll be referring to them quite often.

**Mr O'Toole:** What does TWh mean?

**Mr McNeil:** Terawatt-hours.

**Mr Conway:** To the uninitiated, terawatt-hours —

**Mr McNeil:** Let me go back to your home, sir, if I can. A normal household in Ontario consumes about 1,000 kilowatt-hours of power each month. It goes from kilo- to mega- to giga- to terawatt-hours, so it's about  $10^9$  kilowatt-hours.

**Mr Conway:** There. This is a test item.

**Mr McNeil:** It's the volume of energy. It's quite a large volume of energy. To give you an example —

**Mr Laughren:** Ten to the ninth?

**Mr McNeil:** Ten to the ninth kilowatt-hours. Right. Sorry. It's quite a bit of energy. To give you an analogy, 142 terawatt-hours of electric power is quite a large amount of electricity. The total energy consumed in the city of Toronto in one year is around the order of 10, to give you a volume, a figure for what that size actually is.

In terms of the system capacity implications of NAOP, which I think the committee will be well versed on, which is the removal from service of the Bruce A plants in the spring of next year and the Pickering A units at the end of this year, my task was to look at, given that, what are the implications and what are the responses that would be necessary to ensure that the customers of Ontario continue to have reliable power, which is our key concern, to make sure the lights actually stay on.

I'll just walk the committee through this quite quickly, if I might. In the 1997 business plan we had roughly 30,000 megawatts of capacity available to us; we had 30,000 megawatts of plant in Ontario available to us. The peak demand requirement for that capacity, as I pointed out, was about 26,000, and that included the 18% reserve margin that year, giving us about 3,400 megawatts in surplus. This is what the Ontario power system looked like before the decision to lay up the units came to be taken.

The NAOP impact in 1998 removes about 2,000 megawatts, leaving us with a surplus of about 1,300 megawatts available to us. That's primarily the removal of the Pickering units.

As we go on to remove the available capacity from the Bruce units in the following year, that NAOP impact



grows from about 2,000 megawatts up to about 4,400 megawatts, which puts us in a deficit perspective with respect to the reserve margin. Again, it's with respect to the reserve margin, and that reserve margin you don't count on running. You have it available to run. So the deficit with respect to the reserve margin is about 1,300 megawatts.

As you go to the year 2000, you start to see what is currently in our nominal plan. It is not in an approved business plan of the corporation, and I would just like to reinforce that there's been no reinvestment decision made. In our nominal plan we show two of the Pickering units coming back in service as a result of a successful recovery starting in the year 2000; one I believe comes back in June and one in December. That is the going-forward assumption I'm using right now, and I'd like to come back later to show the options I'll be testing that against, but it is in our nominal plan; it's not in the approved plan. The implication of NAOP as the remainder of the Pickering units come back on continues to decline.

1550

If I could just draw the committee's attention to the deficit situation: Basically, if one works with the assumption that the Pickering A units would be coming back on in the year 2000-01, our deficit is roughly 1,300 to 1,500 megawatts with respect to the reserve margin. It would be incumbent upon us to take action to provide that reserve margin back again.

The assessment objectives I carried out were first of all to meet the capacity energy shortfall while maintaining the reliability, minimizing costs and minimizing environmental impacts. Those are the three criteria we put things together with.

We have a whole array of options that were used and discounted due primarily to time. With the removal from service of the Pickering A units and the Bruce units, we're looking at a fairly limited lead time to get plant back on to cover off the reserve margin. The capacity options we look for, and again this is to cover off basically three years of capacity shortfall, in the going-forward plan, assuming that the Pickering A reinvestment is made — if it isn't, I'm going to come back to that. We have a process in place under way to deal with that as well.

First of all, we looked at returning existing mothballed fossil units to service. You've heard about a capacity surplus we have. That capacity we carry in mothballed units as well as plants that are available for the export market. We had two units available to us at Lennox, units 3 and 4, which have been in mothballs, say, since the early-1990s. We also have four units at Lakeview GS that are in mothballed state available for us to return.

We also have available to us an opportunity to purchase on the capacity. It's a short-term capacity from the interconnected market, and I'd just like to draw the committee's attention to that as an option. In the interconnected markets, you'll have many people tell you that they will sell firm capacity on the interconnected markets. Firm capacity is firm up until the day that the supplier has a problem meeting their own non-interruptible load. For

instance this summer, when we were having some difficulty meeting the non-interruptible load in Ontario, we had a firm capacity sale to Michigan under way which we cut. So it's about as firm as you can be until you need it back home. When you're buying from the interconnected marketplace, given the current industry structure — I can't say what the future industry structure might do — it is very difficult to buy firm capacity. You can buy it, but you may never get it. From a reliability perspective, it seems like a good thing to do, but you really can't count on it to a large degree.

The other near-term capacity option is to improve the reliability of existing fossil units. The fossil units have operated over the last four years approximately one extra year than planned. Because of the deteriorating nuclear performance, the fossil units have had to be called upon to operate more than what was originally planned for. One of the opportunities that was available to us was to look at the fossil plants and improve how reliable they are, so that when you're counting them into the reserve margin, they are actually countable.

One of the other options we had available to us was to increase purchases from existing NUGs for the short-term time frame. We're not in a situation where we're asking people to commit plant at this point, as in the situation where we had really a two- to three-year time frame that we were trying to deal with, with the removal of service at Pickering A and Bruce A.

We also have an option we have taken which was to issue a request for proposals — I apologize for the "RFPs" — from all other suppliers on what they could supply to us over that three-year period. We did in fact issue that RFP a month ago, and that RFP closes in about one hour and two minutes from now. Other people in a position to supply us energy over the next two or three years have had the opportunity, and still have that opportunity over the next hour, to identify what they have to give to us.

We are also issuing an RFP — and that RFP should probably be issued next week or after the next board meeting, depending on some legal advice — for energy conservation. Many of our stakeholders told us there were some, and they never sized the amount, low-hanging fruit, if you can pardon the expression, that would be available to us under the energy conservation area. So we are in the process of issuing an RFP to see what we get. We've been working with the Canadian Energy Efficiency Alliance, which represents the stakeholders in that area, to develop the process. They've advised us that there is most likely very little available over that short time frame, but we're continuing to access what is available to us.

The short-term capacity options we have selected are primarily considering reliability to get the reserve margin back in place within a suitable time frame, which is an immediate time frame. Second to that reliability issue was the cost issue. In terms of the capacity to meet the reserve margin, we are in the process of returning units 4 and 3 from Lennox, representing about 1,100 megawatts. Unit 4 is scheduled to return to us on December 30. We have an

expectation that it'll actually be here a month earlier now. Unit 3, which has had some of the parts removed to be utilized on units 1 and 2 while they are in the mothballed state, will be back next spring. Bringing those units on to service under reserve margin should provide a sufficient reserve margin basically to get us through.

The other item we're doing is improving the reliability on the fossil plant. We're making a very minimal investment in improving the reliability on the fossil side. We're looking at about \$70 million being invested over the next three years to arrest the reliability that was really due to running the fossil system so hard, harder than planned, because of the decreased nuclear performance.

I have very much confined my remarks to short-term, dealing with the assumption that, and again in our nominal plan, there's an opportunity to reinvest in Pickering A. We also have a process under way to investigate all the longer-term options which I think have been under this committee's consideration. How are we getting those other options?

The option we have available to us that we are exploring right now is whether Pickering A and Bruce A are economic to return. We've done some preliminary assessment which we discussed with the board. Our preliminary assessment is that Pickering A looks like it could be economically feasible to return to service.

On the investment, that decision hasn't been made. That decision will have to be made towards the middle of next year in order to meet the year 2000 time frame. There is some slippage opportunity in that date. If you're going to be a year late, you could possibly increase more risk in the reserve margin by focusing your efforts, but you wouldn't want to do it for more than a year or so. You wouldn't want to compound that risk over two or three years. So we're really looking at a decision on Pickering A being made somewhere in the second quarter of next year. In order to make that, there will have to be a business case, and as corporate planner it is my task to identify what those alternate options are from all players.

We are in the process of developing a request for proposal that would be issued, again, in the early part of next year to make sure that all the alternative options to investing in Pickering are available for that decision, be they rets, be they other suppliers, be they the interconnected marketplace. That RFP is in the process of being designed now to be implemented. We are also exploring the installation of combustion turbine-combined cycle units at existing sites in Ontario.

**Mr Laughren:** That's gas?

**Mr McNeil:** They are gas-fired plants, sir. Yes, they are. We are also looking at other opportunities of repowering and expanding existing plant, particularly on the fossil side, whether we can repower. Again, repowering is basically no longer firing it on coal; firing it on gas. We call it refuelling. In the industry we call it repowering. There are some opportunities there to expand. On the fossil side, there is a whole range of other issues with which I'm sure this committee is familiar that have to be dealt with.

The other item we are looking at is upgrading the transmission side of those: What improvements would be made? There's been much ballyhoo in the press recently from some of our competitors who would like to build an interconnected transmission system to us. That's one of the options that would be available to us. We'll be having that whole suite of options come forward at the same time as Pickering is coming forward and, once again, for whenever the decision for Bruce A is ready to be made. That deals with the capacity situation.

#### 1600

I'd like to turn the committee's attention to the energy implications. Rick has been covering off some of these energy implications. What I look at is basically, how much energy can I reliably expect to get out of the nuclear side of the business over the next three to four years? The production expectations out of nuclear have decreased substantially since the 1997 business plan. The 1997 business plan, for instance, in 1998 assumed that we were going to get about 90 terrawatt-hours out of the nuclear side. In August we were estimating about 62 terrawatt-hours. I believe two to three terrawatt-hours of movement in either direction can be expected. We're in the process of updating that.

When we gave the presentation to the board, we were looking at about 20 terrawatt-hours of decreased energy production compared to the 1997 plan for next year. Continuing on, throughout the time frame, in 1999 we expect to have about 30 terrawatt-hours of decreased energy production from the nuclear facilities compared to the plan. The decrease starts to get smaller — that's poor English, probably — but by the year 2000 we're down to 20 terrawatt-hours. Again, this assumes that the Pickering A units start to come back online. As a result you'll see some of the lost production increase. At the same time, we're also starting to get the benefit of the recovery initiatives on the Pickering B, Bruce B and Darlington plants, so we're getting the benefit of those and the improved performance out of that.

If I again can have the committee's patience for a second, this is basically what the power system looked like on January 18, 1996, in terms of meeting the primary demand. This is an actual shot that shows you that for purchases and NUGs and from hydro-electric and nuclear which predominantly were mostly base-loaded options — purchases aren't in the base load unless it's a base-load purchase — the purchases are really just before you get the fossil in terms of margin. You run the hydro-electric units and the nuclear units and then the fossil units. The running occurs that way primarily because of the marginal cost.

Once you've got the money invested in the plant and the staffing, really what you're playing with is the fuelling cost. You try never to run the fossil plants. That is basically the strategy we continue today, to try never to run the fossil plants, because of the fuel cost. You're looking at a large differential in the fuel price if you're into cost minimization.



You'll notice in 1996 the amount of nuclear capacity that was available to meet the demands on that day. I just want to compare that for the committee. What we're expecting in January 1999, after the Bruce A and Pickering A units are laid up, is a substantial increase on the fossil side. It is a very substantial increase. It was one of the items the board was very concerned about in terms of the responses.

In terms of looking at the actions for meeting energy shortfall, again, for energy we primarily looked at what the cost differential is in the fuelling cost. Once you have the capacity, once you have the plants there, what do you run next? What is the next incremental cost the customer has to see? We looked at the decrease in nuclear energy. Given the short lead time options we have and the interim period of this time, the decision was to increase the fossil burn in Ontario. We also explored the option, of course, of increasing the fossil burn outside of Ontario. There are some issues which I'll explore in a section about that. This is energy rather than capacity.

On the decrease in energy production and increase in fossil for primary demand, the committee members may be asking themselves: "How come, if you're decreasing nuclear energy by 28, you're only increasing the fossil by 23? Where's the other five?" The other five is in the interconnected marketplace. Basically our strategy to eliminate our emissions and to obey the acid gas regulations was to decrease the amount of secondary sales we had. We were planning on about 10 terrawatt-hours of secondary sales in each of the next four years.

We've eliminated them to roughly zero, and I say "roughly zero"; I can't say we've eliminated them totally, because in some of the agreements we enter into we swap. But it all comes out in the wash. At the end of the year we made what we bought. We just got it at different times of the year at a cheaper price than we would have by making it ourselves. That's the reason for the gap: the interconnected market that we're not going after to a large degree any more. That decision to increase the fossil energy resulted in a substantial increase in fuel cost to primary demand. If you look at the increased cost in fuel over the period of 1998 to 2001, we're looking at about \$2.1 billion in additional fuel relative to meeting the primary demand needs of the province, a very substantial increase, totally a result of the decreased nuclear performance over that period of time.

The lost secondary profit: again, associated with the secondary sales it's not really a cost; it's a revenue that we're not getting. We were expecting to make in the order of about \$500 million in profits as a result of secondary sales, which would go to offsetting some of the costs in Ontario Hydro and the rates which our customers pay, giving the total cost of replacement energy — and you'll hear that term — relative to primary demand of about \$2.7 billion over that period of time. It's a fairly substantial increase. It's really predicated on the increased fossil fuel.

In terms of the other options, we have an RFP out identifying what other options are available to us. Some of the stakeholders that we share have identified that there are

those and we're hoping to receive them. If they are cheaper than ours and have less impact, we will be visiting them and trying to sign a contract with them.

In terms of environmental impacts, which we consider to be a fairly serious event, we're moving to advance the installation of low-NO<sub>x</sub> burners at Nanticoke and Lambton, roughly \$30 million worth of expenditures in the 1997-99 period.

Adjustments to the current low sulphur fuel program to achieve additional reductions: Basically the people in charge of the fuel program have entered into the marketplace and are dealing with the suppliers to bring additional low sulphur fuel in place. Trying to put it in context, prior to these adjustments Ontario Hydro's unit sulphur emissions — that's the grams of sulphur per kilowatt-hour of energy produced — are roughly 50% of the legal requirements in the year 2000 that the American utilities face. We're about half of where they have to be already in terms of unit emissions.

As a fleet average, on fossil fleet alone our fleet is roughly anywhere from two to five times cleaner than plants in the adjoining American states. The reason I'm bringing that to the committee's attention is that many people felt we could go to the interconnected marketplace and purchase that. Any attempt for us to go on the interconnected marketplace, from an Ontario perspective, would result in increased emissions to the province. That's about the SO<sub>2</sub>, NO<sub>x</sub> and the more global concern which is CO<sub>2</sub>.

We're also installing ignition gas at Nanticoke GS to provide us some fuel flexibility and to be able to burn a lot more lower-sulphur coal at that plant. A lot of the existing fossil plants were not designed in an era where low sulphur coal was expected to be burned. We have made a large amount of adjustments in our fuel program, but we're really stretching how much further we can degrade the fuel that we put through the plants.

We're also converting Lennox units 1 and 2 to permit firing on oil and gas. We expect that firing on natural gas, which will have an environmental benefit, will also reduce the fuel cost that's associated. During the summer months in Ontario, when there's no great demand for natural gas, the gas price tends to drop. If we operate Lennox during that period of time, there's a significant fuel saving to be had versus burning oil during that period of time.

#### 1610

To summarize the environmental impact in terms of our emissions over the next four years, and this is the forecast emissions, the total emissions, not incremental; these are the total emissions we expect out of the fossil side of Ontario Hydro, and I'll also deal with the regulatory limits and the voluntary commitments we have: For SO<sub>2</sub>, Ontario Hydro lives under the Countdown Acid Rain regulations of the province. We're limited to 175 gigagrams of SO<sub>2</sub> emissions in any calendar year. Under that same regulation, we're also regulated for the total amount of acid gas. That's sulphur dioxide and nitrous oxide. The combined total of those two: We are limited 215 gigagrams of acid gas emissions.

You'll note that the fossil system in Ontario Hydro is basically operating at the acid gas emission levels for the next three-year period.

We have sufficient energy-meeting needs within the province just barely, from an energy perspective, to meet energy needs. We will be purchasing in the interconnected marketplace and banking that and watching it very carefully from a cost perspective. Once you're in the interconnected marketplace, cost tends to drift up. We will do this in a very cautious manner to build sufficient margin to guarantee that Ontario Hydro never exceeds the acid gas emission limits struck for it.

We have a strategy in place to develop about five terawatt-hours of purchases on the interconnected market. Again, this is energy, this is not as load-meeting capacity. We'll arrange not to run our plant and to burn coal elsewhere. We'll be managing that very carefully, again, because of the increased emissions when we buy on the interconnected marketplace. This is a balancing act we'll go through.

In terms of our NO<sub>x</sub> emissions, which are a precursor to smog, we have a voluntary commitment between Ontario Hydro and the Minister of Environment that in the year 2000 we will limit our NO<sub>x</sub> emissions to 38 gigagrams.

As it currently stands now, with the technology available to us in our plants, we will probably be emitting, in gross emission levels, about 41 gigagrams. We'll be working with the government to identify opportunities in that year where, basically from a societal point of view and from a regional perspective, we don't contribute in excess of the 38 gigagrams to the smog issue in Ontario. That will be primarily through the area of offsets, getting somebody else to reduce their emissions where they have an opportunity to do so.

In terms of carbon dioxide, which is a more global problem but still a serious issue to be dealt with, we'll be increasing our CO<sub>2</sub> emissions totally as a result of our increased fossil burn. They'll go up to about 30 gigagrams a year. We have a voluntary agreement that's outlined in our greenhouse gas emission strategy which basically says that by the year 2000, Ontario Hydro will return its emissions to what they were in the 1990 period. In 1990, our actual emissions were 26. Our commitment includes the use of offsets. The commitment, which was outlined in our strategy, is that the net impact of our fossil operations will be 26 gigagrams — sorry, teragrams — of CO<sub>2</sub>. We'll be taking action to live with that commitment. I apologize for the change in number.

Again, just to summarize and not belabour the point, what we're looking at in the near term is increased fuel cost in the fossil system of about \$2.1 billion, reduced secondary profit in the order of \$500 million, increased OM&A to bring Lennox back on to service again, which is a fairly cheap capacity move but the increased OM&A associated with the additional running — there's more wear and tear on the fossil system as a result of the increased running, let alone the increased running we've had over the last few years — and the increased capital expenditures associated with some of the plants.

You look at the capital investment, and while it is a large number to you and me, it is not significant if we were trying to — many have read in the press, I can't say I've heard it directly, comments that we were basically reinvesting large amounts in the fossil system to prepare ourselves for a more competitive marketplace. This is nowhere near what we would be doing if we wanted to prepare fossil to operate on the interconnected marketplace. This is a made-in-Ontario, for-Ontario plan. It's not a substantial investment compared to what we would do in order to prepare ourselves for a competitive world outside of Ontario. This is what's to get us through the next two or three years until other decisions can be made about the reinvestment in Pickering A or until a decision is made and we see some recovery.

Sir, I've completed my presentation and will be available for questions.

**The Chair:** Mr McNeil, I thank you very much for a very comprehensive presentation. We will proceed on a round of caucus-by-caucus questioning. We'll begin with the government caucus. I'll remind us that when we complete, we will come back to a couple of other questions on behalf of our counsel. They have some questions for Mr Machon as well, so we'll just stay at the witness table, please. We will begin with the government caucus on this presentation by Mr McNeil.

**Mrs Fisher:** I think, rather than reading and taking my time to identify the areas in your review — there are ones with respect to finances as there are with technical overview — I would ask that Hydro provide us with a report responding to the executive summary, and within the context of the report some comments, and if they are wrong, substantiation as to where you feel they're wrong and how you feel differently.

**Mr McNeil:** Mrs Fisher, the report you're dealing with is the September 9 one, I believe.

**Mrs Fisher:** September 7, 1997. This one here.

**Mr McNeil:** Ernst and Young has been in the process of modifying that report to reflect some of the comments, but I'll make my comments with respect to that report.

**Mrs Fisher:** Thanks very much. That will help a lot.

I would like to support one of the statements you made earlier on, and it's turning out not to be the way it's going to turn out. One of the comments you made is that it has been the practice of Ontario Hydro not to run the fossil fuel plants because of issues related to the environmental impact, and I think fuel costs, and I happen to agree with that start point. Unfortunately, the diagrams we see before us are going to take us much against its own will if we proceed in the way we're going today. I would like to ask, the additional increase in fuel costs amounts to about \$2.1 billion?

**Mr McNeil:** Yes.

**Mrs Fisher:** Regardless of whether it's Pickering — and I guess Bruce has its own special problems with regard to the boiler tubes — my understanding of the reactor retube at Bruce is around \$1.2 million.

**Mr McNeil:** I'm not sure of the number for the retube of the reactors. Around \$1.2 million?



**Mrs Fisher:** I'm asking.

**Mr Machon:** Around \$1.2 million?

**Mrs Fisher:** Excuse me, \$1.2 billion.

**Mr McNeil:** Around \$1.2 billion. That's correct.

**Mrs Fisher:** And I correct myself as well: \$2.1 billion in increased fuel costs. Sorry.

**Mr McNeil:** Right.

**Mrs Fisher:** So it's \$1.2 billion, I think.

**Mr McNeil:** Yes.

**Mrs Fisher:** And I understand that the pressure tube repair runs to the tune of \$600 million per unit —

**Mr McNeil:** Right.

**Mrs Fisher:** — of which, my understanding is, \$200 million per unit has already been spent. So my question would be, if you had the human resources in place, it looks to me like you recover that situation and proceed.

**Mr McNeil:** Can I just comment on that for a second? While the recovery would be under way on Bruce A under that scenario, we would also have to continue to meet the power needs of the province. So while the Bruce A reactors are not available to run, we are going to end up burning that fuel.

**Mrs Fisher:** I would agree with you if all units were shut down at one time to make that happen. I think if you did it incrementally and you kept 3 and 4 up, more than half your purchase problem would be gone. That's a re-consideration that maybe could be thought of.

Pat, do you work directly under Mr Fox?

**Mr McNeil:** I used to work under Mr Fox. I currently work for the chairman. When I put this plan together I used to work for Mr Fox.

*Interjection.*

**Mr McNeil:** I believe it was.

**Mrs Fisher:** You're wondering today, are you?

My question is this. My understanding is that there were about \$400 million to \$500 million in sales made outside of our country to other sources in the past eight to 12 months. Did we try and contract new sales abroad?

**Mr McNeil:** We have been selling electricity on the interconnected marketplace over the last 18 — we always sold electricity on the interconnected marketplace. We have been selling.

1620

**Mrs Fisher:** My understanding is, in reading the papers, that there were new contracts being signed. This was before the IIPA report came out.

**Mr McNeil:** There have been some contracts we have entered into, with some of the interconnected marketplace, to supply. We've been in a position to negotiate ourselves out of those.

**Mrs Fisher:** With no penalties?

**Mr McNeil:** I would like not to go into the commercial aspects, but for the prime contract we'd entered into, which was basically a firm capacity contract in the Michigan area, we were able to negotiate out of that by both parties sitting down at the table, looking at what the needs of both were under the revised set of circumstances we faced. We arranged a situation where we can help them meet their needs and they can help us meet our needs. The

people we're dealing with do not have a peak that occurs on the same day that we have. They're a summer-peaking utility, we're a winter-peaking utility, and we were able to strike a deal that they could provide some assistance to us at a very favourable price and we could provide some assistance to them at a very favourable price on par; it was a net.

**Mrs Fisher:** It was a net?

**Mr McNeil:** It was a net. There was no incremental cost.

**Mrs Fisher:** When IPPSO was before us — I can't remember my days any more. Was it just yesterday or was it last week? It doesn't really matter. They were here before and they indicated to us that the request for proposals was out but they showed some hesitancy to enter into doing anything with those because there's no long-term commitment. My feeling is that Hydro can't have it both ways. You're not changing at all the attitudes of the monopolistic continued operation. If you're looking for displacement of power for other than coal or oil burn, then you're looking at substantial overhead as well, capital injection to put up these pretty ready-made plants, NUGs. They opinionated to us that a three- to four-year commitment wasn't good enough because we weren't really able to displace that electricity requirement problem. How do you feel about that?

**Mr McNeil:** I do not care to comment on IPPSO and what evidence they may have given to the committee. What I could comment on is the RFP we have out right now, which is to meet the needs that Ontario Hydro and its customers currently have. It's not so much Ontario Hydro wanting it both ways, it's Ontario Hydro trying to meet its customers' demands at the lowest cost.

The ratepayers have a terrific investment, as have the taxpayers of this province, in the assets of Ontario Hydro. The RFP that's out assumes we're going to continue to make use of one of those investments in Pickering A and it's confined to the time frame for the RFP. If the decision is made that we're going to bring the other options on and not reinvest in Pickering A, then I think there will be plenty of opportunity for people to build plant and operate plant.

I agree with their comment. The RFP would not provide sufficient funds to cover the fixed costs of building new plant. Again, if Pickering A comes back on service in the year 2000, the province of Ontario and the ratepayers do not need new capacity until about the year 2003.

**Mrs Fisher:** I guess that leads to my next question, though. It's kind of like the chicken and the egg, isn't it? If they take the risk as private sector and invest in it and can displace the power, why would you want to restart As, any of the As? It's not a conspiracy thought so much as just practical reasoning. It makes a lot of sense to me if you want to protect that asset we have today that the consumers are paying for, never mind worrying about what else they're going to pay for. Again, I would take the approach that you ought to invest in that asset today instead of watching it walk away.

**Mr McNeil:** I believe we are making that decision with respect to preserving the investment in Pickering B, Bruce B and Darlington and attempting to reinvest in Bruce A and Pickering A if the business cases are to substantiate it.

**Mrs Fisher:** The issue with regard to the Bruce Energy Centre hasn't been raised here much, but I understand you're very familiar with it. My question is this. Although it's an attached appendage, if you will, to a nuclear thing, it seems to have ended up in two realms of decision-making over there on that 19th floor, one being the retail, because there's a steam issue and setting a price at that. Electricity should have been negotiated but hasn't.

I want to raise it because it's a very significant backyard issue to us. I think you're familiar with the intent of a diversification program at the Bruce Energy Centre over the past 10 years. There's been a heck of a fight, if you will, by the community to try to convince Ontario Hydro, while it was in a surplus capacity, to sell energy instead of generating it and sell nothing. We were unsuccessful. I was one of the proponents in those days. I'm still one of them, as an elected member trying to represent the community as well. Do you think it's about time Ontario Hydro got out of there?

**Mr McNeil:** Let me put it this way. Ontario Hydro has a great deal of respect for the customers we have at the Bruce Energy Centre, where they are steam customers to us. We're working with them to resolve an issue that's created because of the removal of service at Bruce A. We had costed steam for them on the basis of marginal steam. Without Bruce A being there, we don't have surplus steam to provide them. As a result, in order for us to deliver the contract, they're exposed to a very healthy increase in the price of steam.

We are working with all the people in the Bruce Energy Centre to bring resolution to that issue in a manner which I think preserves the Bruce Energy Centre and the customers there, as well as Ontario Hydro's commitment to provide them with the steam at a reasonable cost. It will not be at the cost that was originally discussed way back when.

**Mrs Fisher:** If I might just close my questioning by continuing on that a little bit, because it's been one of those things: People have minimally dealt with the heavy water issue here, have hugely dealt with the nuclear issue because of the IIPA parameters and review within here, but we ought to be cognizant of the subsidiary, if you will, or secondary impact this is causing. I know that an Ontario Hydro official locally is quoted in the paper as saying that it's costing Ontario Hydro \$1 million a month more because it's burning bunker sea oil in our backyard as opposed to providing this steam from the Bruce A site.

**Mr McNeil:** This is true.

**Mrs Fisher:** I don't know what measurement Ontario Hydro has put on the environmental impact to us on that or how it can substantiate that type of continued feature over a long time, even a year, which I understand is the new proposed contract. I don't suppose you'll have an answer for how long you think we can expect that to go on.

**Mr McNeil:** We've been working with the customers very anxiously since the decision was taken with respect to Bruce A to bring a resolution to this issue. The person who is working on it happens to work for me now. We're trying to work with the customers to bring a resolution that would be a win for them and a win for ourselves. We are anxious to have the Bruce Energy Centre in a position where there's a going forward. I think we're both working towards the same thing.

**Mr Conway:** Mr McNeil, you've made a very definite impression with the committee and I thank you for that. Your presentation gives rise to a number of questions. Let me start with some of my questions.

First, did I hear you say at one point that, to the greatest extent possible, you were going to minimize the use of American coal-fired electricity because of environmental standards and performances which were rather better here than there? Did you say that?

**Mr McNeil:** We looked at the opinions of going into the interconnected marketplace, as I explained to the committee or attempted to, and again I apologize if I didn't make myself clear. The interconnected marketplace from a capacity perspective isn't as reliable as having it —

**Mr Conway:** We're going to have to talk a language that's more — we've got a viewing audience as well and, I tell you, if you're not a fast-talking lawyer from Philadelphia, you're probably not going to understand most of what he's saying. Just try to keep the language as general and as basic as —

**Mr McNeil:** I apologize and I will try.

**Mr Conway:** I appreciate the difficulty.

**Mr McNeil:** Buying it from outside Ontario sources through the interconnected marketplace, which is to the US or to Hydro-Québec or to Michigan, is not as reliable from a capacity perspective as ourselves. From an energy perspective, when you're in a coal market, which is what we're in, without nuclear and without hydro-electric, you basically have one option in the utility industry right now, other than gas, because of its price, which is an option as prices come down. If you look at the utilities around us, what they have built today is basically coal. Our coal plants in Ontario — primarily as a result of the scrubbers at Lambton GS and also because we burn a lower blend of sulphur coal than US utilities, the sulphur emissions from Ontario plants are, on average, somewhere between three to five times cleaner than if somebody else were making that product.

**Mr Conway:** That's what I thought I heard you say. By the way, that's a very marked improvement in terms of language, so I thank you for it. I don't mean to be smart-alecky in saying that, but I understood that and I think more of the audience — the viewing audience particularly — understood that than some of the earlier efforts. That's what I thought I heard you say.

We had the Clean Air Alliance in here the other night and, I'll tell you, they did not leave this committee with a very good comfort level that the replacement power plan that is part of your nuclear recovery plan is particularly attractive on environmental grounds. I don't want to get



into their testimony with you, but certainly they left us with a very strong presentation that was not very positive on certain of these environmental questions.

How much electricity in a typical February afternoon would we be able to buy from and have delivered from the province of Quebec on a February afternoon, not an August afternoon?

**Mr McNeil:** I'm trying to deal with that question, February afternoon, because you realize that Quebec is a winter-peaking utility at the same time?

**Mr Conway:** That's why I asked the question.

**Mr McNeil:** Depending on the situation, in the order of 400 to 800 megawatts, depending on what their loads are at the time. That's the capacity of it.

**Mr Conway:** My impression is that while there is some excess capacity in Quebec, particularly in the winter months there's not a great deal of it that would be, in the short and intermediate term, available on multi-year contracts to Ontario Hydro. Is that a right assumption?

**Mr McNeil:** Mr Conway, I think we share a similar view on that issue.

**Mr Conway:** Thank you for that. We've talked a lot in this committee about the reliability and the capacity factors at our nuclear power plants. They have not, over time, met the capacity factors that were advertised in earlier days. Your plan for replacement power is going to put, as you yourself have just indicated, substantial new pressure on the coal-fired plants and the oil-fired plant at Lennox, which I gather you intend to operate —

**Mr McNeil:** Sparingly.

**Mr Conway:** Not "sparingly," but you intend to retool it so you can fire it with both oil and gas.

**Mr McNeil:** Right.

**Mr Conway:** One of the questions that has been put to me by people who know this a lot better than I has been, has anybody at Hydro really thought through the stress they will be placing on particularly the coal-fired plants to carry this additional load?

**Mr McNeil:** Yes, we have.

**Mr Conway:** And you're confident that you're going to be able to get the kind of output out of places like Nanticoke and Lambton and Lakeview, those three particularly?

**Mr McNeil:** Yes, I am, sir.

**Mr Conway:** What gives you that comfort level?

**Mr McNeil:** Experience with those plants and the management of those plants. The benchmarking that was done on the fossil side and the hydro-electric side shows that the fossil plant and the hydro-electric facility have been managed to the point where they're in the upper quartile of the industry. We have expectations.

**Mr Conway:** But you're moving into a different kind of league now with those. Those plants are going to be carrying a much heavier load than they've carried in the past.

**Mr McNeil:** They're carrying a much heavier load than they have over the last three or four years. In the late 1980s and in the early 1990s those plants produced up to a 30 to 34 terawatt-hour power production level.

**Mr Conway:** To another issue. I want to know what assumption you have built into your forecast for the 12 operating nuclear power reactors. What capacity factor have you assumed for the 12 operating nuclear power reactors in the years 1998, 1999, 2000 and 2001?

**Mr McNeil:** The capacity factors we've built into that are identical to the ones that Rick Machon talked to you about this morning, which is having the units coming back on and operating more reliably during that period of time. You can look at the energy production we're expecting to get out of it. It's not at the 86%. I believe it's at 78% and 79% during that period of time.

**Mr Conway:** So you're expecting in that period of time a capacity factor for the remaining —

**Mr McNeil:** Twelve units.

**Mr Conway:** — operating nuclear power reactors at about what?

**Mr McNeil:** Seventy-nine per cent, growing up to 86% in the later part of the period.

**Mr Conway:** Where have those plants been, in terms of their capacity factor, for the last three years?

**Mr McNeil:** I would concur with my nuclear friend here.

**Mr Conway:** Is that the key assumption?

**Mr McNeil:** It is a key assumption to this.

**Mr Machon:** The Darlington unit, from 1994 to 1997, a rolling four-year average, the average per year has been at 81%. Bruce B has been at 79% and Pickering B has been at 70.4%. But Pickering also had that year where she was off-line, so that's a four-year average during that time.

**Mr Conway:** Just playing the arithmetic, their capacity factor has been roughly about 74%, 75% over the last —

**Mr Machon:** Seventy-five, 76%.

**Mr Conway:** And you're expecting, then, in 1998 to 2001, a capacity factor of about —

**Mr Machon:** About 78%, 79%.

**Mr Conway:** That's an ambitious target.

**Mr Machon:** We believe it's reasonable.

**Mr Conway:** You believe it's reasonable, and I am not surprised you believe that. The question is, what happens if that capacity factor at those 12 plants comes in for whatever reason at 72% or 69% or worse?

**Mr McNeil:** Mr Conway, if they come in — they are there for the capacity. They are there on the peak days, so we're not worried about capacity, so I'll focus my answer on the energy side. If it's on the energy side, we'll have to purchase energy on the interconnected marketplace to meet the demand.

**Mr Conway:** So it's got a cost implication.

**Mr McNeil:** It has a cost implication, definitely.

**Mr Conway:** That's what I wanted you to confirm.

I want to come back to a point that was made earlier by Mrs Fisher, I believe, and it has to do with these proposals, these RFPs that are out there as part of your plan. The committee has received testimony that's been highlighted in recent days by our friends at Energy Probe, and I thank them for it, that as recently as the October 7 board meeting, Hydro has apparently — reading from Mr Farlinger's

letter to Jim Wilson, the new Minister of Energy, dated October 15, 1997: "Power sale agreement with Shell Canada Products Ltd." I'm reading directly from that letter:

"In an effort to retain Shell Canada as a customer, Ontario Hydro, at its Sarnia refinery, in accordance with the previously approved load retention and expansion price, LREP option, the board of directors authorized the corporation to enter into a three-year power sale agreement under the LREP option with Shell Canada Products Ltd. When jointly agreed to with Ontario Hydro, the agreement specifies that Shell Canada will agree to purchase all power for its Sarnia refinery from Ontario Hydro and not to self-generate."

There was an earlier example I think this year where a similar deal was struck with Domtar Packaging up in northwestern Ontario at Red Rock. So a question arises. We are on the one hand going out to make deals, calling for requests for proposals to generate power, and on the other hand we're negotiating with people like Shell and Domtar not to self-generate. Can you just explain the apparent contradiction?

**Mr McNeil:** Yes, sir, and I'll try to do it in a very simple fashion without giving out any commercial activity at the same time. The revenue associated, for instance, with a kilowatt-hour — electricity in your own house: You pay roughly, depending on where you live, anywhere from eight cents to nine cents a kilowatt-hour. That's revenue that comes in from that sale. If you were to generate that electricity yourself as a large industry, you would expose yourself to costs in the order of 3.5 cents to four cents. Let's say the differential is four cents. That four cents of lost revenue would have to be taken from other ratepayers to pay the cost of having Ontario Hydro here today the way it's currently structured. So from Ontario Hydro, and I'm using a quote here, from the "power pool" concept, the cost that Shell isn't paying or anybody else isn't paying by self-generating would have to be borne by the rest of the province.

**Mr Conway:** Mr McNeil, I would understand that in ordinary times, but these are hardly ordinary times. I'm looking at your chart on page 3, "System Capacity Implications" and the nuclear asset optimization plan, and I'm looking at these deficits. We are going to have to meet some potential deficits. They may be better than these forecasts, but they may be worse. We may be forced into that interconnect market whether we want it or not, to buy some of that cheap, dirty, two-cent Ohio Valley coal —

**Mr McNeil:** It's not two cents.

**Mr Conway:** Oh, it's not two cents. It's gone up. All right. I haven't checked it recently. We may very well be buying some of this dirty, coal-fired stuff out of the US on the one hand, and on the other hand we're telling people like Shell and Domtar and maybe others — why wouldn't we in the next few years say, "We want people like Shell and Domtar and others to get in and do some of that," particularly if it's gas-fired, because it's relatively economical and environmentally it's relatively attractive? It just doesn't make sense to me.

1640

**Mr McNeil:** The RFP we issued, which is closing in a few minutes from now, should bring out Shell and everybody that is available to it. I believe when you get down to the self-generation, self-generation for many industries is definitely a viable option. What it comes down to, however, is a simple matter of costs that have to be recovered.

**Mr Conway:** I understand that.

**The Chair:** Thank you, Mr Conway. That concludes the round for a moment. I want to ask, on that point, if you'd be good enough to table with the committee the summary of the RFP you indicated closes in about 15 minutes. Would you table it with the committee? I wanted to make sure I picked up on this before I went to you, Mr Laughren. If you would table with the committee a summary of those RFPs, please, so we can take a look at it. We obviously don't need the details, but we'd like to see a summary of what has come in.

**Mr McNeil:** Certainly.

**Mr Laughren:** Mr McNeil, I enjoyed your presentation. There are 11 million people in Ontario and you're the only one who has ever been asked by Mr Conway to speak in plain language. I want you to know that.

**Mr McNeil:** Thank you.

**Mr Laughren:** I think that's an honour. I was looking at your slides and at the bottom line "surplus/(deficit)" minus numbers on page 3. Am I being too simplistic to say — and I'm not suggesting a course of action here — that if you didn't have any peaking problems, there's enough surplus to look after that deficit?

**Mr McNeil:** If we didn't have sufficient —

**Mr Laughren:** Do you follow what I'm saying?

**Mr McNeil:** Yes. If the consumption of electricity was flat throughout the year?

**Mr Laughren:** No. For example, in 1999, you've got a surplus of 3,000. Is that deficit of 1,333 netted out?

**Mr McNeil:** I'll go through that again for you. I apologize if I don't communicate in an understandable fashion. We had roughly 3,300 megawatts of spare capacity prior to NAO. This is capacity in excess of the reserve margin. Removing the Pickering A units from service reduced that by about 2,000 megawatts. The available plant that we have, to the net reserve margin, we still really have in excess. If you wanted to say we had surplus capacity, we still have in excess of about 1,300 megawatts for this winter.

**Mr Laughren:** I think I'm with you now. I think it was my problem, not yours. When you buy on the interconnect market — if that's the right term — do you get a price for which you pay a premium because of that or it is a discounted price if you were a regular customer as opposed to one who is buying on the interconnect?

**Mr McNeil:** When Ontario Hydro purchases on the interconnect market, it pays the market price at the time. For instance, if we were buying from Detroit Edison or from Consumers Power, we would be buying on the basis of what they offer the power for. Electricity in the interconnect marketplace is becoming a market-driven price. In the utility structure of 10 years ago, there were econ-



omy sales. Basically it was two utilities side by side that had built up their own power plants, and one person would be able to produce power cheaper than the others and they had no need for it at home. While they were recovering all their fixed costs from their ratepayers, they were able to sell at their fuelling class product plus a profit, and they used the profit to buy down the rates at home. That's getting harder and harder to get.

**Mr Laughren:** I wanted to ask you about the lay-up of the units and what would be taking the place of those units; in other words, the replacement plan that is being put in place. At the end of the day, and I know this is hypothetical at this point, those units that will be supplying the power that's missing from the lay-ups will be expensive in terms of the \$2.1 billion excess cost, right? If at the end of the day you decide not to reopen the A units at Bruce and Pickering at that point, it seems to me there's a critical decision to be made. At what point do you decide if any of what you've done on the fossil side should continue, or should the market then be opened up wide and you put in place a plan to as quickly as possible shut down those fossil units? Have you thought that far ahead?

**Mr McNeil:** Yes, I have thought that far ahead in terms of designing the process. Basically the process we'll be going through is to develop the Ontario Hydro options from their existing facilities, and what other future opportunities there are from within Ontario Hydro, and what its skill mix is in terms of additional capacity if the investment decision was not to invest in Pickering A.

We'll also be putting an RFP out to ask other suppliers, assuming that Ontario Hydro continues as a monopoly structure — I'm dealing with that industry structure. I have not tried to think through the thought process if there were some other industry structure, but then I wouldn't have the problem.

**Mr Laughren:** Could we look at the environmental side? At one point in your chart it shows that what you would be emitting would be exactly what is allowed, right? The term "coincidence" came to mind immediately.

**Mr McNeil:** It was so coincidental that I had my staff go over it four times, but it is coincidental. It also puts us in a situation where, as I mentioned before, we will have to provide ourselves some margin to ensure that Ontario Hydro complies with the acid gas laws. We'll be buying some energy in the United States and from Hydro-Québec to try to balance that off so that we at no time exceed the acid gas emissions. We're trying to do that with some finesse, though, so we're not incurring additional costs nor additional environmental impacts that we would wish not to have.

**Mr Laughren:** That voluntary agreement that Ontario Hydro has is with the Ontario Ministry of Environment, right?

**Mr McNeil:** I believe that's what it is, yes.

**Mr Laughren:** That voluntary agreement goes into the year 2000, I believe.

**Mr McNeil:** Yes, it does.

**Mr Laughren:** Are you convinced that voluntary agreement will be the same by then as it is now? In other words, it's not a progressive —

**Mr McNeil:** Those are the assumptions I'm working under right now. That commitment is for the year 2000. I would assume it would be there for the year 2000. I also believe that the environmental issues surrounding any fossil burn are going to continue to increase over time. It's not my expectation that it would stay at 38 forever and a day.

**The Chair:** We have exhausted the questioning now for this round of the presentations.

**Mr O'Toole:** Mr Chair, I believe you started with the Liberals.

**The Chair:** No, I started with the government this time. The good news is that from the looks of the agenda, Mr O'Toole — and as you're checking, Mrs Fisher will know she actually began the questioning at, to be precise, 4:20. I think we've been unfortunate in not being able to get to Ms Ng tonight and I know that leaves her on a bit of a horn of a dilemma waiting. The good news is that I would recommend to this committee that Tuesday morning we return to this topic immediately, first off. I would like all witnesses back at the table, if you don't mind, because I would propose that the committee have a chance to complete section 3 and then engage in an overall kind of questioning that may involve any one of you in response.

In addition to that, and I make this comment to direct the clerk and to direct our staff, I would like particularly Ms Clitheroe to be here at that time to answer a number of questions, so I'd like to make sure that that's very clear. I respect the fact that she's been out of the province today and only just arrived back in an hour or so ago. But I would like to make sure she's on notice right now of my expectations for next Tuesday, if you'd be good enough to carry that message through to her.

If that meets with the agreement of the committee, then what we'll do is stand down for the remainder of the day, because it's almost 5 o'clock, until tomorrow. But for this topic we'll hold it off until Tuesday of next week. Is that generally agreeable?

**Mrs Fisher:** One question, Mr Chair: The way we've been going, like this morning, for example, where we didn't really get enough time to deal with Mr Machon, just as a recommendation so that we do finish off the one we're on right now, could we start with the final questioning of that one before we take the next presentation? I think there's an indication that there are still some outstanding questions to this specific one we're on now.

**The Chair:** I'm sorry, the final questioning of what?

**Mrs Fisher:** We did one round of questions on the power system implications.

**The Chair:** With Mr McNeil.

**Mrs Fisher:** Yes, I personally don't believe that we're finished in that question area. I wonder if you could start with that and then move on to Ms Ng and then go to questions on that as well.

**The Chair:** If there's a wish of the committee to go around again, but there may not be, and if there's not, then

I am not prepared to go around just for one caucus. I would if all caucuses wanted to have a go at it, but I am a little pressed to keep us on some schedule. I want to remind you that in my comments I indicated we carry on the schedule, but then I've asked the witnesses to stay at the table so we can ask generic questions. In fact, you'll have a chance to come back at that point and ask questions then. Would that be agreeable?

**Mrs Fisher:** I think it would as long as it's not limited to 10 minutes for the whole bunch of us.

**The Chair:** It may be limited, depending on the time. I have no control over that. I will give some guidance, but I'm not giving any guarantees until we get there.

**Mrs Fisher:** Could I ask you to ask the table if we could finish off this one first, as we start, and then go on?

**The Chair:** We'll ask the caucuses.

**Mrs Fisher:** I'm not challenging the Chair. I'm just asking.

**The Chair:** Of course you're not challenging the Chair. I'll ask the caucuses if they're prepared to carry on questioning of Mr McNeil.

**Mrs Fisher:** Thank you.

**The Chair:** Are there other questions you wish to ask at all?

*Interjection.*

**Mr Laughren:** I don't want to be unhelpful, because I appreciate Mrs Fisher's point, but I don't have any more questions.

**The Chair:** Fine. Two caucuses have said they are not.

**Mrs Fisher:** I accept that. Thank you.

**The Chair:** As far as I'm concerned, we have completed with Mr McNeil in this round, but you have a chance to ask Mr McNeil other questions when we get to the general opening round. I think that will achieve your objective.

If I can just go over a couple of other items of business before we conclude today: Are there any members of the committee who will not be travelling with the committee but rather will be travelling on their own tomorrow?

**Mr Kwinter:** I understand that Mr Conway will be travelling on his own.

**The Chair:** Will you, or not?

**Mr Kwinter:** I will be travelling with the committee.

**The Chair:** That is my great pleasure, sir. Mr Conway will not, Mrs Johns will not; that's all. Everyone else will be travelling together.

**Mrs Fisher:** No, I won't.

**The Chair:** You will not either. That's what I meant. A hand up means "I will not," Mrs Fisher.

**Mrs Fisher:** I will not.

**The Chair:** That will be three who will not. I want to make sure the clerk knows. The bus will leave promptly at 9 am, 0900 for Mr Conway. We will leave from the front door of the Parliament Building, so please make sure we know where we're going from, right on time. That's number one.

Number two, we know about Monday, which will be a series of about 15 deputations. Tuesday will be the expert witnesses back again, Ms Clitheroe included, and others who our staff will be sorting out over the next day or so.

Tomorrow we leave at 9 o'clock from this building and we go to Kincardine. You have before you the affairs of the day. You know where the meetings will be held tomorrow and you know that the presentations will begin particularly at 7 tomorrow evening. There's the tour of the facility and then a number of deputations, and again on Thursday morning. That gives the picture for the committee for the remainder of this week.

Just before we go, our counsel has departed the scene. I don't know where he is. We have a series of questions yet to ask, so on his behalf I will simply table the note that our counsel has some questions to ask. He may do it in writing or we may reserve that until Tuesday when he comes back, but there are a number of items there to deal with at that point.

It almost being 1700, any other business to table with the committee? If not, then the committee will stand adjourned until 9 tomorrow morning, when it will meet at the front door of the Legislature and depart immediately.

*The committee adjourned at 1654.*



## CONTENTS

Tuesday 28 October 1997

Ontario Hydro.....	H-331, H-360
Mr Rick Machon	
Mr Pat McNeil	
Ms Malen Ng	
Mr Marc Eliesen .....	H-351

### SELECT COMMITTEE ON ONTARIO HYDRO NUCLEAR AFFAIRS

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H-13

H-13

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of Ontario**

First Session, 36<sup>th</sup> Parliament

**Assemblée législative  
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Première session, 36<sup>e</sup> législature

**Official Report  
of Debates  
(Hansard)**

Wednesday 29 October 1997

**Journal  
des débats  
(Hansard)**

Mercredi 29 octobre 1997

**Select committee on  
Ontario Hydro nuclear affairs**

**Comité spécial des affaires  
nucléaires d'Ontario Hydro**



Chair: Derwyn Shea  
Clerk: Donna Bryce

Président : Derwyn Shea  
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## LEGISLATIVE ASSEMBLY OF ONTARIO

## ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

SELECT COMMITTEE ON  
ONTARIO HYDRO NUCLEAR AFFAIRSCOMITÉ SPÉCIAL DES AFFAIRES  
NUCLÉAIRES D'ONTARIO HYDRO

Wednesday 29 October 1997

Mercredi 29 octobre 1997

*The committee met at 1903 in the Best Western Governor's Inn, Kincardine.*

**The Chair (Mr Derwyn Shea):** Good evening everyone. On behalf of the select committee, I certainly would like to welcome you to the meeting this evening. The select committee will be in order and the purpose of our meeting this evening to hear deputations concerning Ontario Hydro nuclear affairs. I expect many in the room have received and/or read the terms of reference of the select committee and I am very pleased to at least introduce the members of the committee as we move around: Mr Laughren, Mr Conway, Mr Kwinter. My name is Derwyn Shea. I'm Chairman of the select committee. There's Dr Galt, Barb Fisher, Helen Johns, and Mr John O'Toole, who's not here yet, but should be here just momentarily. To my left are Hansard and then our consultants and legal counsel, and to my right Donna Bryce, who is the clerk of the committee, and legislative research.

We are here to hear your views on the issue that is before the select committee at this point, and I would like to pay particular thanks to you, Ms Fisher, for receiving us and making sure that the tour today was well executed. We appreciate the hospitality we've received.

**Mrs Barbara Fisher (Bruce):** Thank you very much, Mr Shea. I appreciate the opportunity to bring the select committee to the community of Bruce and welcome you all here on behalf of the constituents of Bruce. I'm sure you're going to be even more highly educated after tonight's endeavours.

**The Chair:** I have no doubt. Thank you for the words. Those of us who have been in municipal politics know exactly what you're saying. That allows me to segue into our opening round of deputations.

I might say, for purposes of Hansard and for those who are in the room this evening, we did have an extensive, and I think a very helpful, tour of the facilities this afternoon. During the course of the tour some members of the committee who are nameless because frankly I don't know who all they were made very favourable comments about some of the T-shirts being worn by some men and women in the control room, if nothing else. Mr O'Toole may be hanging his head in shame and embarrassment as I say this because he was enamoured by it, but there were others.

As I came out from dinner ready to come downstairs to the meeting, I was met by someone I don't know and can't identify who wanted to make sure I was clear that he was

approaching me not as a member of the Power Workers or as management, but as a worker in the control room, to say they were so pleased that the select committee (a) was there, (b) seemed to be asking some fairly penetrating and informed questions, and (c) had made such comments about the T-shirts that indeed there is a T-shirt for every member of the committee. I want you to know that.

Mr Conway, you can explore this one later, but they are extra large. Mr Kwinter and I may not be able to wear them too openly all the time, but we will nevertheless have them framed and keep them with great memory. Mr Laughren of course will be able to share his with other members of his family.

I want you to know that on behalf of the committee we receive that with a great deal of pleasure and will look back upon our visit to Bruce with more than great pleasure.

## BRUCE TOWNSHIP

## BRUCE COUNTY

## TOWN OF KINCARDINE

## TOWN OF PORT ELGIN

**The Chair:** We'll proceed with the opening deputations. The committee is here not to speak but to listen very carefully and to ask questions. There is a time frame before us. We have an hour and a half for the first block of questions and to be of assistance, particularly to members of municipal council, at least one of whom who I understand has to leave with some dispatch because of an all-candidates' meeting. That is not unimportant.

We will ask the representatives from Bruce township, the county of Bruce, the town of Kincardine and the town of Port Elgin — there are two deputants in each case — to please come forward and take chairs at the witness stands.

It is my understanding that Reeve Howard Ribey has to leave to go quickly, so if no one has objections, I will allow us to do questions to him first and allow him to excuse himself. Then we'll carry on with our questioning for all the other witnesses who are at the table. Will that be agreeable to everybody at the witness table? Marvellous. Thank you very much.

We are in your hands. We have an hour and a half, I remind the committee, for presentations. I would ask if members of the municipal delegation can keep their remarks reasonably concise. It will allow more time for



members of the committee to ask their questions of you. So if you can keep it very tightly focused, we would appreciate that. Let's begin. Mr Reeve, I suppose you're the one who's beginning. Let me begin with you.

For the purposes of Hansard, it would be helpful if just before you start, Reeve, we could ask each member at the table to identify themselves so that we can make sure it's recorded in the record. Let's begin over here.

**Mr Malcolm McIntosh:** Malcolm McIntosh, planning director for the county of Bruce.

**Mr Keith Campbell:** Keith Campbell, warden of Bruce county.

**Mr Howard Ribey:** Howard Ribey, reeve of Bruce township.

**Mr Ted Mielke:** Ted Mielke, deputy reeve, Bruce township.

**Ms Maureen Couture:** Maureen Couture, CAO and clerk, town of Kincardine.

**Mr Charles Mann:** Charles Mann, mayor, town of Kincardine.

**Mr John Van Bastelaar:** John Van Bastelaar, mayor of Port Elgin.

**Mr Doug Court:** Doug Court, chief administrator officer, town of Port Elgin.

**The Chair:** Thank you very much.

**Mrs Fisher:** Could I just ask a question before we start? I've been asked whether or not this is actually being televised. I don't know the answer to that. Is this being picked up on the legislative channel as if we were there, or not?

**The Chair:** I'll ask the clerk to respond.

**Clerk of the Committee (Ms Donna Bryce):** No. The only location that is televised on the Parliament channel is in Queen's Park, in room 151.

**Mrs Fisher:** Is it being taped?

**Clerk of the Committee:** Yes. Hansard is recording it.

**Mrs Fisher:** Okay. Thank you very much.

**The Chair:** Then may we begin. Mr Ribey, we're in your hands.

1910

**Mr Ribey:** Good evening, members of the committee. Bruce township would like to thank you for the opportunity to appear before your committee this evening to make our thoughts known.

The township has two major areas to address today: One is safety and the other is the effects on economic development. While economic development is a high priority to the municipality, we believe public safety has to be a higher concern.

The township is concerned primarily with safety to local residents and workers. While this should be the regulator's job, the elected officials wish to identify this issue to your committee. While the IIPA report identifies safety issues, most of these issues have been known for some time. The IIPA report rates safety and emergency preparedness below standards. This is an area that needs the most urgent attention.

From a municipal point of view, we have concerns for funding, third-party resources and training of municipal officials to be prepared for an emergency. With regard to funding, we feel the province, and particularly the Ministry of the Solicitor General and Emergency Measures Ontario, whose job it is to oversee the preparedness, should be requested to assist with funding adequate to meet their own standards. The funding should provide for all third-party resources required, including police, fire, ambulance, municipal staff etc.

We are told that for a full-scale drill or in a major event more than 50 police officers with full equipment could be required to respond for traffic control. The allocation of these costs should be predetermined in funding agreements which provide for the various parties' costs. There is a need for better training of elected municipal officials, who change periodically. For example, we will have a new council in 1997, 1998 and the year 2000, and the membership of this new council could be dramatically different, but on their first day in office they could be asked to respond to an emergency. There needs to be better training so these elected officials are trained and ready to act when required.

We understand firefighting is now provided by trained volunteers from the different shifts, and we would like serious consideration to having dedicated firefighters on site. We were just made aware since we made this presentation that Ontario Hydro has begun to address that, so we certainly applaud that effort.

We have an emergency planning coordinator on staff, who is out of the country this week, but we would request that he be allotted an hour of your time next week in Toronto to expand on emergency preparedness and safety issues.

We believe there is little argument that the province needs electricity to function efficiently. Locally, we believe nuclear power is a proven, reliable source which has many environmental advantages over fossil fuel sources, and there are limits to other sources of electricity.

The Bruce nuclear power development has a huge, local economic impact. The Bruce nuclear power development is the major employer in the county and it fuels the Bruce Energy Centre. We are asking if the IIPA report has had enough consideration and whether all options and impacts have been considered.

The acceptance of the IIPA seems to have happened very quickly without local consultation, and the local communities which feel the most impact believe they should have had an opportunity to comment on the impacts. Bruce township appreciates the efforts Ontario Hydro has made to help establish the Bruce Energy Centre with low-cost heat energy. Ontario Hydro has an obligation to continue to support the Bruce Energy Centre with low-cost services, including steam and electricity, at prices which make these industries as competitive as first envisioned.

Bruce township and the local community strongly support providing preferred electrical rates to the Bruce Energy Centre customers and urge Ontario Hydro and the

province to complete any necessary changes to the Power Corporation Act, and if that is necessary, we encourage the province to quickly complete the required amendments.

We have heard comments that the IIPA report is a step towards privatization of Ontario Hydro. If this is the case, Bruce township would have concerns about the security of radioactive materials. Inventory of material would need very careful scrutiny from a federal agency such as the Atomic Energy Control Board.

The IIPA report focuses on leadership, culture, people, processes, organization and labour relations. Bruce township feels strongly that there needs to be a focused effort by management and staff to cooperate at all levels to improve ratings to the nuclear plants as identified in the IIPA report. For example, we heard a Power Workers' Union presentation recently in Ottawa to the Atomic Energy Control Board where the Power Workers' Union representative in a question-and-answer period said the Power Workers' Union objected to mandatory drug and alcohol testing. We believe this is not an unreasonable requirement and should be implemented to assure the public that competent personnel are fit for duty to complete these very responsible tasks.

If the IIPA recommendation continues as proposed, we would like to see the following addressed.

The training of operational staff: We understand that about 250 trainers are required and that there would be an equal number of trainees being educated at any one time. We encourage that the western training facility at the Bruce Nuclear Power Development be used for this purpose as it would help to reduce the impact on the economy of the area and help to stabilize the real estate market.

The central maintenance service at the Bruce Nuclear Power Development should be utilized by Ontario Hydro for manufacturing and repair of as much Ontario Hydro equipment as possible for its facilities. Mr Andognini has identified this facility as very well equipped and capable of providing the needed services. This would also help to lessen the impacts we are facing.

We would also like to see mitigation of the effects on Bruce Energy Centre; mitigation of local effects, including local employment and the local housing market; continued monitoring and attention to the tritium levels in Lake Huron — this was started a couple of years ago when there was a study done in conjunction with Bruce township and Ontario Hydro and they found them to be quite acceptable, but we feel that should continue on — some assurances that the plan to bring Bruce A back into operation by the year 2003 be confirmed.

The impact of job losses as a percentage of total local jobs is much greater with the Bruce A layup in Bruce county than similar impacts of layoffs at Pickering or Darlington because of the much larger number of jobs in those areas closer to larger urban centres and a lower percentage of local job losses this causes to those areas.

Due to the larger, relative impacts to Bruce county than in other areas, consideration should be given to bringing

Bruce A back into operation sooner than the other nuclear plants.

We hope that your committee realizes that the Lake Huron shore area is one of the largest supporters of the nuclear industry in Ontario. The local residents are familiar and comfortable with nuclear power plants as they have some knowledge of nuclear operations and partially because most of the employees live in our area and are neighbours, friends and family members of many of us.

Ontario Hydro has been an excellent corporate partner in the community, and although not always successful, they have attempted to mitigate the concerns of all parties, regardless of their concerns or philosophies. We are very much aware of the economic impact of Ontario Hydro in our area and we support them, but we also believe that the constructive review brought forward by the IIPA of the operations of the corporation is in everyone's best interests.

We applaud the efforts of the select committee on Ontario Hydro Nuclear Affairs and their efforts to obtain local input into the IIPA recommendations. We recognize the need for changes and improvements to the nuclear industry. Bruce township made these same points at a recent Atomic Energy Control Board hearing in Ottawa and continues to focus on safety first and addressing economic impacts.

Thank you for giving us the opportunity to appear before your committee.

**The Chair:** Thank you, Mr Reeve. Councillor Mielke, I presume you may have to go to the same meeting. Would you like to add any points at all? No? Fine.

*Interjection.*

**The Chair:** That'll be some all-candidates' meeting. Can I perhaps pause for a moment, if the other deputants don't mind, because of the reeve's pressing schedule? We'll pause and ask some questions. We'll begin with the government caucus this evening and move around. We'll keep this to five minutes, Ms Fisher.

**Mrs Fisher:** Thank you, Reeve Ribey, for your presentation. There are a few things that I would ask about. We did, this afternoon on the tour and previously in the public hearings, address the issue of public safety, fire safety and security issues. I think you've raised a very significant point with regard to how the responsibilities interlink between the Ministry of the Solicitor General, the community and Ontario Hydro. You raised a few areas of weakness. I don't want to put words in your mouth, but would you agree with that?

**Mr Ribey:** Mm-hmm.

**1920**

**Mrs Fisher:** Would you think that in the past — I certainly have had reported to me since I was elected some displeasure with the way in which that wasn't coming together.

**Mr Ribey:** Yes, Mrs Fisher. I guess the concerns were that things were being mandated by the Solicitor General and Emergency Measures Ontario and that the input we had was minimal. It was putting extra pressure and costs on everybody. In regard to training, although we do agree



with training, they were suggesting that we needed one full-scale drill a year. There's a major cost to this when you include social services from the county or elected officials from the three municipalities — Bruce, Tiverton, Kincardine township at the present time — the police —

**Mrs Fisher:** How is that managed right now? Do the individual municipalities from where those people come pay that or contribute to that?

**Mr Ribey:** They pay for the municipal people. The fire department people are picked up by the municipalities. The policing and social services people are all paid by their respective agencies.

**Mrs Fisher:** There's no bill back to Ontario Hydro and yet it's something that is very necessary in terms of the safety of the community.

**Mr Ribey:** That's correct and I'm not aware — in all fairness to Ontario Hydro, Ontario Hydro pays for our emergency coordinator, and for maintenance and operational costs of his duties too. They pay for that, no question about that.

**Mrs Fisher:** You also raised a point of issue with regard to the Bruce Energy Centre. Although it's not a direct Hydro issue, it certainly has something to do with this community. You raised a concern with regard to a competitive or a fair electricity rate. Can you expand on that a little bit?

**Mr Ribey:** This has been an ongoing issue for years, as you are aware. At the present time, the industries in there are forced to pay rural rates, which are in the neighbourhood of 12 cents —

**Mrs Fisher:** I think it's seven, actually; seven to 12.

**Mr Ribey:** In that area, anyway. If they were within an industrial base in an urban area, it would be much less than that, no question.

**Mrs Fisher:** I'm asking some questions that perhaps I know the answers to but I think in fairness to the rest of the committee, so that we get some of this out, which is part of the intent of bringing the hearings to the backyard of the community that's going to be impacted, I guess in the past there have been representations made to Ontario Hydro on a number of occasions to try and assist the Bruce Energy Centre along in terms of the potential for diversifying the job opportunities in the community. Can you explain what's happened at those?

**Mr Ribey:** They haven't gone very far. There hasn't been anything productive happen from them, really. For one reason or other, there always seems to be a roadblock or something gets in the way. Nothing has happened in the past number of years.

**Mrs Fisher:** Are you suggesting that maybe Hydro could have been a little more receptive to understanding the plight of the community?

**Mr Ribey:** I'm suggesting that Ontario Hydro could be too, but I'm also suggesting that perhaps our provincial government could lend a hand in helping out too.

**Mr Sean G. Conway (Renfrew North):** Reeve Ribey, just a couple of questions. On the first page of your brief you talk about some of the provincial agencies. One of the questions the committee has been dealing with over the

last few days is the role of the provincial fire marshal's office in dealing with a number of issues between municipalities and Hydro and the Atomic Energy Control Board. What kind of experience have you and your colleagues at Bruce township had with the Ontario fire marshal's office over the years, particularly with regard to fire protection issues, emergency planning? Have they been very involved in those issues with you?

**Mr Ribey:** Our local fire department does not serve the BNPd. They have their own volunteer fire department and consequently there isn't that much involvement between them. Am I correct? Ted's on the committee. He probably knows more about it than I do.

**Mr Mielke:** The Tiverton fire department provides backup for Ontario Hydro and they have some training in their facilities. Also, a lot of the firemen who serve on the Tiverton fire department are also Hydro employees.

**Mr Conway:** The question I'm trying to really get to is, over the past number of years, has the fire marshal's office been involved with people at Bruce township just generally talking about emergency preparedness and fire issues of a general kind, particularly with the nuclear power station in the area?

**Mr Ribey:** I would say not.

**Mr Conway:** What has been the impact on real estate in Bruce township in the last two months since the announcement of August 13?

**Mr Ribey:** I think that's too early to say, sir. The full impact of this hasn't really set in, so it's too early to say. I would anticipate, though, that it will have more effect on the housing market than it will on the farming market. The agricultural land in the last year has increased in our area and I would anticipate it wouldn't make too much difference.

**Mr Conway:** On page 4 of your brief, and I'm quoting now, "We encourage that the western training facility at the Bruce Nuclear Power Development be used for this purpose, as it would help reduce the impact on the economy...and help to stabilize the real estate market." I've got to believe that the announced layoff of, what, 1,700 people at BNPd has had an impact on the real estate market throughout the region. I just want to —

**Mr Ribey:** I don't think there's any question it certainly will have. How much it has had yet, I don't know. Perhaps some of your other deputations can answer that better than I can.

**Mr Conway:** We'll raise that with them.

**Mr Floyd Laughren (Nickel Belt):** Reeve Ribey, welcome to the committee. It's good to see you.

I wanted to ask you about the Bruce Energy Centre. We just had a drive-through of the energy centre. It's certainly the first time I've seen it. I'd heard about it but I had never seen it before. You state in your brief, "Ontario Hydro has an obligation to continue to support Bruce Energy Centre with low-cost services, including steam and electricity, at prices which make these industries as competitive as first envisioned." I understand your pitch in here, but it was also my understanding that they did not have an obligation to do that, even though we might all

want them to. They don't have an obligation. They had a contract which was long-term but didn't have the price in it.

**Mr Ribey:** They have an obligation to provide steam for 25 years. If you're saying a legal obligation, perhaps not; a moral obligation, we believe they do.

**Mr Laughren:** So it's the moral obligation you're pitching here that they should continue, because people made an investment based on that assumption.

**Mr Ribey:** That's right.

**Mr Laughren:** I represent a constituency in a northern part of this province close to Elliot Lake and I remember what happened in Elliot Lake when Hydro stopped buying uranium from Elliot Lake. There was a massive dislocation in that isolated community, more isolated than this community. Ontario Hydro was directed by the provincial government to belly up to the bar and come up with some money. I think, and I stand to be corrected on the money, it was around \$150 million.

**Mrs Fisher:** It was \$260 million.

**Mr Laughren:** At Elliot Lake? Anyway, it was more than small change. It made an enormous difference in Elliot Lake, so I appreciate where you're coming from.

The other point I wanted to ask you about is farming and direct jobs. When you talked about, in your response to Mr Conway or Mrs Fisher, there not being such a direct big impact on farming I didn't understand that, because I thought there were a lot of farming jobs linked to the Bruce Energy Centre.

1930

**Mr Ribey:** There are certainly a number of people who own farms who work at Ontario Hydro, there's no question about that. But what has happened in the last two, three years is that a number of cash crop farmers have moved up from southern Ontario and are picking up the land at values something less than they were getting for their down farther south. That has stabilized our market.

**Mr Laughren:** That's unrelated completely to the Bruce Energy Centre. I see. I appreciate that clarification.

When you talk about the province helping out, what did you have in mind?

**Mr Ribey:** As I suggested, I think some of the things that could happen there are changes to the Power Corporation Act. I don't think that's something that's unreasonable to ask for.

**Mr Laughren:** To do what?

**Mr Ribey:** To deal with energy rates or electrical rates.

**Mr Laughren:** To the Bruce Energy Centre, or are you talking about something totally different?

**Mr Ribey:** That's been one of the big issues all along, that the reason the cost of electricity couldn't be competitive was because of hiccups in the Power Corporation Act.

**Mr Laughren:** I'll seek clarification on that from our legal counsel. I don't understand that.

**Mr Robert Power:** There are a number of issues involved. One issue is that in the rate classification Ontario Hydro uses it has chosen to put the Bruce Energy Centre industries within the rural rate, which is a higher rate than

a similar industry would receive if it was located within a municipality. There are additional interpretation questions regarding whether, if the industries could aggregate their load together, they should be able to qualify for an industrial rate. There seem to be interpretation questions around the Power Corporation Act and there seems to be no clarity on it.

**The Chair:** Thank you, Mr Ribey. I know this is unique. There may be some other member of the panel who is desperate to have one more question of you specifically, although the other witnesses are still staying here to carry the banner. Is there any other member of the —

**Mr Doug Galt (Northumberland):** If I might, Mr Chair, just quickly. On the third page you're making reference to "security of radioactive material," more concerned about it if it was privatized than if it's run as a public monopoly. Do you feel that the AECB has a bigger job to look after private industry than public? Where I'm coming from is that British Energy came and made a presentation to us a while ago and indicated how safety had improved through privatization. Everything sounded really good. I don't think it's quite as good as they were presenting to us, but I wondered if you'd expand just a little more on your concerns there.

**Mr Ribey:** It's our philosophy that the nuclear is probably in a better position to be owned by a crown corporation, where there's more than just a management board of people who are interested in profits, controlling it really. Does that answer your question?

**Mr Galt:** It answers it and it certainly reflects what I'm hearing is the general feeling in Ontario, but we've been getting some other information from other jurisdictions that kind of makes you sit up and take notice. Anyway, thank you very much. You certainly reflect Ontario.

**The Chair:** From the opposition caucus or the third party, any questions to add? Thank you very much, Mr Reeve and Councillor. I wish you well at the all-candidates meeting.

**Mr Ribey:** I'm just interested. I am acclaimed, so I don't necessarily have to be there, but I do want to.

**The Chair:** Reeve Ribey, don't fool an Irishman. I might just bring you back in here under subpoena and give you a whole hour and a half.

**Mr Ribey:** At any rate, could I ask the possibility that our emergency preparedness coordinator meet with you?

**The Chair:** Would you be good enough to speak with the clerk? She will be able to advise you what the schedule of the committee will be for next week. You arrange that and she'll tell you what the openings may or may not be.

**Mr Ribey:** Fine, thank you.

**The Chair:** I'll leave that in your hands to deal with her. Thank you very much. You are both excused and I appreciate your time for that. Councillor, are you staying?

**Mr Mielke:** Yes.

**The Chair:** As we move into the next round, perhaps I'll start over here with Mr Campbell, if you would, for the first time when you present, be good enough for Hansard just to identify your name; as we've done it once,



we'll do it one more time, and then we'll proceed from there. Who is going to be making the next presentation?

**Mr Campbell:** I'm Keith Campbell, the warden of Bruce county. On behalf of the county of Bruce, I'd like to thank the committee for permitting me to make this presentation.

As I said, my name is Keith Campbell, reeve of the village of Mildmay and warden of Bruce county. As you may or may not be aware, Mildmay is known as the gateway to the Bruce, and we are very proud of our heritage as a member of the Bruce community.

I will be making the first of a number of submissions from area municipalities and groups. Well, obviously, I wasn't the first, but that's nothing new. I believe you will find these to be thoughtful and to include expressions of heartfelt concern. I know you will listen closely to our presentations.

As you're well aware by now, the county of Bruce is vitally concerned with the future of station A at the Bruce Nuclear Power Development.

The terms of reference of the select committee include, among other matters, consideration and examination of the costs and environmental impacts of the nuclear recovery statement. Clearly, the intent of this review is to consider much more than the financial impact of the closing of station A on the Bruce community. We believe the committee has an obligation to consider the total community impact of its decision.

I'm here to stress to the committee the importance of the future of the Bruce Nuclear Power Development to the county of Bruce. I will not be going into specific details on the economic impact of the closing. This will be outlined in other companion presentations. I will, however, be focusing on the larger community and human impacts of your decision.

A little bit of history: The county and Ontario Hydro have developed a relationship extending back nearly 30 years. The relationship included the development of a world-class nuclear generating industry in Bruce county, employing many Bruce county residents. It is essential to understand that the relationship was developed to benefit all residents of Ontario.

The residents of Bruce county are proud of their efforts in addressing the energy needs of all Ontario. In spite of the current difficulties, there have been immense benefits to the consumers of goods and services in Ontario and beyond.

As a result, any decision you arrive at needs to consider the long-term commitment that the residents of Bruce county have made to Ontario Hydro and to other Ontarians. Such commitments should never be taken lightly or for granted.

Area impacts: Bruce county is blessed with many natural resources and assets. These naturally occurring resources have enabled Bruce county to become a leader in agricultural production and tourism. Some of our natural features are considered of world significance.

Based upon 1991 statistics, there are approximately 65,000 persons living full-time in the county. During the

tourism season, this may grow to in excess of 100,000 persons. Contrary to usual perceptions, Bruce county is not primarily a retirement area. More than half of our population is between the ages of 25 and 54. These are the primary household and family formation age brackets. The availability of employment to this age sector is crucial.

The majority of employment opportunities in Bruce county are small businesses. In 1997, there are slightly more than 2,000 businesses in the county. The large majority of these businesses employ less than six employees. As a result, these small businesses will be highly sensitive to changes in the local economy. As a result, we are vitally concerned about the ripple effect of your decision.

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As I referred to earlier, agriculture is a vital element of our economy. In 1991, the value of agricultural gross sales was approximately \$225 million. You may be aware that nearly half of all farms in Ontario require off-farm employment. Some of this off-farm employment exists due to the spinoff benefits of the BNPD. We cannot ignore the potential impact of the closing of station A on the economy of the greater area or other sectors of the economy.

I am sure you will be provided with more specific calculations for the lakeshore impact communities. However, I wish to emphasize that the loss of 1,725 direct jobs, and potentially an additional 2,000 indirect jobs, will have serious repercussions for the county economy. At a minimum the loss represents 5.3% of our total employees, and could be as high as 10% of our total employees. This would be a tragic situation. The lakeshore area of the county would suffer the greatest employment loss.

The point I am attempting to press upon the committee is that Bruce county residents have made a significant personal commitment by supporting the nuclear community. We are now asking that the nuclear industry support the residents of Bruce county in a similar manner.

Future implications: I recognize that we are all impacted by the need to restructure our organizations and economies to fit the new world economy. Our concern is that we do not foreclose on our future in achieving short-term objectives.

We are aware of the importance of the international thermonuclear experimental reactor project, called ITER, to ensuring long-term safe energy generation. The viability of this project may possibly be impacted by your decision. Do we wish to send the wrong message to the world community concerning ITER? I hope not.

The county of Bruce has a vision statement which reads "...protect the quality of life of Bruce county while ensuring the growth of sustainable communities based upon diverse economic opportunities which respect the natural environment." What this essentially means is that we do not sacrifice our future based upon the needs of today. I implore you to do the same. Do not give up on Bruce county.

In conclusion, let me reiterate that your decision is much more than one of economics. You need to consider the community and human impacts of your decision. I stress the moral aspect of your decision in light of the

long-term commitment of Bruce county to supporting the nuclear industry.

Lastly, it is imperative that we not preclude our future. Change cannot always occur as quickly as we may wish. Often a long-term view, with support, is required to effect positive change.

In closing, I thank you for the opportunity to make this presentation on behalf of Bruce county on such a vital issue. Thank you very much.

**The Chair:** Thank you, Mr Warden. We appreciate that very much. Why don't we continue with the same pattern? We'll do the five-minute questioning. That will just about bring us around the schedule at any rate, and I'll begin with Mr Kwinter.

**Mr Monte Kwinter (Wilson Heights):** Mr Campbell, on behalf of the committee, I just wanted to clarify something. When I read your report I got the impression that you and others in the community may feel that this committee is really making the decision as to what happens with Bruce, and that is the not case. What has happened is that Hydro is making that decision. What we are doing is examining how they got to that decision, whether it was the right decision, and we will make recommendations. Certainly the power to change that — and I hate to use that pun — is not ours. This is a select committee that is looking into those issues. I just wanted to clarify that so you didn't get the impression your fate was in our hands. We're going to try and help you, but this decision will be made by others, on our recommendation hopefully.

**Mr Campbell:** Thank you.

**Mr Kwinter:** One of the concerns I have is the impact of the some 1,700-odd employees who are going to be let go and what a significant portion of your total employees in this area. Have you as a community made representations, other than to this committee, about your concerns?

**Mr Campbell:** Not that I'm aware of, sir.

**Mr Kwinter:** One of our criticisms to date — and we have been querying the board of Hydro and we have been querying the events leading up to the IIPA report — is that there hasn't been a great deal of consultation with anyone other than within Hydro, that options have not really been considered and that the decision was taken very, very quickly. Did you have any inkling that this was coming?

**Mr Campbell:** Very little, if any, as far as I'm aware of.

**Mr Kwinter:** Did the so-called Andognini team meet with any of the local political leaders to indicate what the impact of his report was going to do?

**Mr Campbell:** We weren't contacted directly by anyone. I'm not aware of any, no.

**Mr Kwinter:** Is the first you heard about it when you read about it in the press?

**Mr Campbell:** That's my understanding.

**Mr Conway:** I want to try and understand the impacts. I really appreciated the data you've provided in your brief on page 4: At a minimum, the announcement of August 13 represents a potential loss of 5.3% of the total workforce in Bruce county. That is a very large number in a community like Bruce. I'd like you to help me, and perhaps my

colleagues on the committee, with more specific recommendations around what we could helpfully recommend. Is it your view that the best solution is simply to ensure that BNPD, as it was originally designed, should carry forward into the future? Is that what I understand you to be saying?

**Mr Campbell:** That would probably be the intent, but what that all involves I'm not certainly not aware of.

**Mr Conway:** I'll have a chance to talk to your colleagues about this, but just while I've got the county before me, are there other specific measures that you would like this committee to consider and recommend that would help assist the county of Bruce through what may be a difficult few years? If you and your colleagues at county council were writing this report, what specific language, what specific recommendations would you insert for the benefit of the Legislature and the government and the Hydro board?

**Mr Campbell:** The language I'm not sure of, sir, but nevertheless you'd probably get a variety of suggestions. Being 30 members of county council, you would get 30 suggestions.

**Mr Conway:** I can certainly understand that. If I can, as a former Prime Minister of Canada, the Right Honourable Joe Clark, once said, I need to understand the "specificity" of your program to a greater extent than I have to date. I don't mean to be bold in saying this, but some concrete suggestions that we might consider.

**Mr Campbell:** I don't have a concrete answer, but my gut feeling, if I can use that term, is that I think we have to take a long look at this situation. I think we have to look at all the options, and if it's viable and sustainable and can be up and running, it's for the best.

**Mr Conway:** A last question: I take it that the whole Bruce campus, the BNPD, is quite a substantial taxpayer in the county of Bruce, that you receive a grant in lieu of that must be substantial. Has that grant been affected by the phase-down of the heavy water plant?

**Mr Campbell:** Yes. It's decreasing over a period of years. There's a decreasing amount in place at this time.

**Mr Conway:** Looking at the total —

**The Chair:** Mr Conway, very, very quickly. You're over already.

**Mr Conway:** — can you give the committee an idea of how important and large a taxpayer, through the grant in lieu to the county of Bruce, is BNPD?

**Mr Campbell:** I don't have those figures off the top of my head.

**Mr McIntosh:** We don't have those specific figures tonight.

**The Chair:** Just out of consideration to Mr Conway's request, Mr Warden, I'd like you to feel very comfortable, if upon reflection you and any of the other deputants have some specific thoughts that you would like to add and put on paper, please forward them to the committee. We'd be very pleased to receive it; give you a little time to reflect upon some of the questions this evening.



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**Mr Laughren:** Mr Campbell, are you being acclaimed?

**Mr Campbell:** No, I'm not, sir. Not this time.

**Mr Laughren:** Because I hate people who get acclaimed; I can't stand it.

**Mr Campbell:** I've been there.

**Mr Laughren:** I want to ask you a couple of questions. You make reference to the off-farm employment and you state that some of this off-farm employment exists due to the spinoff benefits of the Bruce Nuclear. Did you mean by that the energy centre? I didn't know what that meant.

**Mr Campbell:** My understanding of it is that a lot of farm people work off the farm on jobs and some of those jobs are probably created through the spinoff effects of BNPD.

**Mr Laughren:** I see.

**Mr Campbell:** If they disappear, then the jobs also disappear. That's my impression.

**Mr Laughren:** On page 4 you certainly give me credit for knowing a lot more than I do. I'm not speaking for my colleagues on the committee. You say, "We are aware of the importance of the international thermonuclear experimental reactor." I haven't got a clue what that is. Maybe I should, but I don't know what the international thermonuclear reactor experiment project is.

**Mr Campbell:** The best way I can answer that, sir, is that in my term as warden I've had the opportunity to go to Toronto for three meetings with a local representative who was very familiar with that aspect. It's a project that we're trying to attract to the country, first of all, with a lot of other bidders involved. Then, from there, we'll see where it ends up within this country. The idea is to get the federal government on side to attract that industry to this country.

**Mr Laughren:** I see. It's a lobbying effort to get more of the industry located here.

**Mr Campbell:** At this point, yes.

**Mrs Fisher:** Welcome to the committee, Keith. In reading through this tonight, one of the most impressive statements to me is found on page 2 when you talk about how any decision arrived at by this committee "needs to consider the long-term commitment that the residents of Bruce county have made to Ontario Hydro, and to other Ontarians. Such commitments should never be taken lightly or for granted." Certainly since the announcement in the community, I've heard that time and time again and I think it's never been put in a better context of what in fact the community has done in support of a corporate citizen.

My question comes to the economic impact of that situation. We have before us tonight something that I'm sure is going to be expanded upon tomorrow in more detail, the type of impact that we're talking about here. If I might ask you this, and it might come up again as the other presenters of this grouping tonight present, since you live in Mildmay and you're the warden of where the county seat is in Walkerton, just a little bit removed from the lakeshore communities, from an outside perspective can

you describe what you might think you would see if we lost 1,725 jobs now, as compared to how you saw it when we lost 708 in 1993?

**Mr Campbell:** What's the phrase? It would be a lot worse than it was then. It was bad enough then but a lot worse now. You're talking more than twice as many. There's an awful ripple effect and it just filters through the whole county. No matter where you live, it's going to filter through the whole county, for whatever effect. I'm not sure whether you feel it more when you're closer or farther away, but the point is, there is an effect.

**Mrs Fisher:** By the chart it shows us that 79.5% of the people who work at Ontario Hydro live in the nine communities that are called the impact area. I happen to remember that about 12% live in the remaining part of Bruce county, and then there's just a little bit of an overflow over that boundary into Grey and Huron with regard to the impact from those job losses. If we're looking at the potential of \$47 million of disposable income lost per year, that's a very significant number.

**Mr Campbell:** Definitely, absolutely.

**Mrs Fisher:** Do you think we have the same opportunity this time? In the past with Ontario Hydro there was a situation, in 1992 and 1993, where the real estate values in Ontario were high and the market, because of the layoffs at the BNPD, became a very attractive point for retiring seniors to come to our communities. Do you think the same potential is there this time?

**Mr Campbell:** I guess when people want to go someplace to retire, they look to see what's around, and if anything like this is taking place, it has a downer effect on the community. I think that certainly would be recognized by anybody interested in going there. They may have second thoughts, I'm not sure, but it's got to have some effect. That's my feeling.

**Mrs Fisher:** Would I be right in saying that in 1992, when the markets were high, it was easier for a senior to sell high in an urban centre like Kitchener, Waterloo or Toronto, Hydro real estate helped the community take care of that problem and in fact come to a community where there was a lower housing cost, where today the housing market of those urban centres is not high and ours is continuing to drop? Would you agree with that scenario?

**Mr Campbell:** I think that would be a fair statement.

**Mrs Fisher:** So it might be more difficult this time to handle even a portion of what we're forced to address here.

**Mr Campbell:** I would agree with that, yes.

**Mrs Fisher:** There's going to be an opportunity for small businesses in the area shortly to respond to a questionnaire that asks, "How is your business affected by the deployment of Ontario Hydro employees from our community?" If I were to ask you the question, is it very significant, significant, not at all, marginal, where do you think most of them are going to fall into this? I'm just trying to get a feel here for the immediate impact to local small business.

**Mr Campbell:** I think it's very significant. I don't think in my mind there's any question about that.

**Mrs Fisher:** How do you think we should address the problems?

**Mr Campbell:** If I was running a small business, I guess I'd have to certainly —

**Mrs Fisher:** Very significant.

**Mr Campbell:** Yes.

**The Chair:** That will conclude that round. Thank you, Mr Warden, for your time. Please stay at the witness desk, because if we have time we'd like to go round again.

Mayor Mann, if you can saddle up to the table, welcome. On behalf of the committee, I can tell you we're very pleased to be quartered and watered in your municipality. Nice to have you here this evening. We're in your hands.

**Mr Conway:** On a point of order, Chair: Do these good people know that our Chairman's a man of the cloth as well as being Chairman? I just hope you all know that.

**The Chair:** I feel moved now for at least a five-minute self-defence thesis. I will reveal more about Mr Conway later in the evening as well.

**Mr Mann:** I'll try and be brief and precise and give you as much information as I can. I'm going to read my report, which you have in your hands, because I have found that in trying to memorize sometimes you lose a word or two and the intent is lost also.

To the Chair and members of the select committee on Ontario Hydro nuclear affairs:

On behalf of the town of Kincardine, I wish to thank the committee for the opportunity afforded our community to address you today. My name is Charles Mann and I am the mayor of the town of Kincardine. Please indulge me for a few moments while I quickly brief you on my personal background.

One portion that was left out: From 1940 to 1946 was my military service. I was an infantryman and then a paratrooper.

From 1946 to 1960, I was a nuclear operator at Atomic Energy of Canada in Chalk River.

From 1960 to 1987, I was a licensed nuclear operator at Ontario Hydro, Rolphton and Douglas Point.

For 27 years I have been involved in municipal politics, 14 of those years as mayor of the town of Kincardine.

I recently made a presentation to the Atomic Energy Control Board in Ottawa in support of relicensing the Bruce NGS B station.

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I wonder if this committee truly understands the size of the shock wave realized by our town when the announcement was released by the Ontario Hydro board of directors to lay up Bruce A and dismantle the Bruce heavy water plant. I believe it is an understatement to say the area was devastated. Since its inception at Douglas Point, the BNPD has been crucial to the economy and wellbeing of this area. It is true that our community has survived changes imposed upon it by Ontario Hydro in the past, but nothing to compare with this most recent announcement.

The facts and figures representing the economic impact of Ontario Hydro's decision have already been given to you. I will not repeat them again, but I do want the com-

mittee to fully realize the depth of our community's concern. Kincardine town is the first line on this form that you've been given tonight.

We are a small community. The resulting impact of the announcement on Kincardine's businesses and residents will be profound.

In the past, the town of Kincardine has been required to absorb fluctuating situations at BNPD and most recently to absorb the loss of financial assistance from the province of Ontario. The town of Kincardine has not sat idly by in the past nor will it do nothing in the future. As a community we are attempting to expand our tourism business. We need more industrial and commercial development. We do have some excellent home-grown businesses such as Global Heat, Special Electronics and Presto-Crest.

We have developed a strategic plan for the next 10 years. The people who assisted in developing the strategic plan are citizens of our community. Our town continues to show a real interest in the strategic plan's implementation.

Through various committees and with area communities we have developed common goal initiatives in support of the Ontario Hydro Bruce nuclear stations during the licensing process.

We have supported the return of rail services specifically for the Bruce Energy Centre. We have supported a committee of volunteer private citizens in putting together a plan for development of the general area of Bruce county.

Please allow me to make a few more observations:

(1) Ontario needs electrical energy with minimum environmental impact.

(2) Kincardine needs jobs. Therefore, Bruce A units should be made operational. At least two units at Bruce A can be operational in the immediate future. The other units can be repaired as time and money permit. A taxpayer investment of the magnitude of Bruce A should not be thrown away. We are told we have a people problem. This can be and is being fixed.

(3) The Atomic Energy Control Board has been and will continue to be an excellent watchdog of our nuclear plants.

(4) It would seem to me that a country that can build the Canadarm for space should be capable of building equipment to replace calandria tubes quickly and efficiently.

In the 1970s Ontario Hydro made a 40-year commitment to this community. We responded by expanding our services and infrastructure accordingly to absorb the influx of people who are now an integral part of our community. We built roads, subdivisions, water and sewer facilities, recreation centres, schools and libraries. These facilities were not cheap. We depended upon Hydro's 40-year commitment.

The employees and families who located here do not want to leave. They do not wish their children to leave. These recent decisions have also played havoc with employees and their families. Not knowing from day to day what your status is regarding employment and location is most certainly a drain on family wellbeing.



The 40-year commitment has turned into a 20-year commitment. This is unacceptable and we implore your committee to incorporate into its deliberations and report the enormous consequences of Ontario Hydro's decision, one that was made without considering the social and economic impacts to our community. If Ontario is truly open for business, this devastation cannot be allowed to occur.

This area is, and has proved to be over the years, nuclear-friendly. The community supports nuclear power. Ontario Hydro should be increasing its presence and facilities here, not decreasing them. Nuclear power is environmentally safe. The startup of fossil fuel plants in place of nuclear plants is an ill-conceived plan which will only further alienate Ontario Hydro from the residents of Ontario. We are already the unwilling recipients of pollution from the United States. Further, Canada is already in the unenviable position of not having lived up to its commitment to the United Nations for pollution reduction targets. We need the residents of Ontario to support Ontario Hydro, not criticize it. We in this area are prepared to support Hydro, provided it is prepared to reconsider its decision and look at some of the alternative business plans which we know have been suggested to Ontario Hydro and this committee.

Once again, thank you for listening to the concerns of the town of Kincardine. We are confident that this committee will take seriously our concerns and ensure that the negative impacts of the decisions and actions which have been made will be reconsidered.

Briefly, further to my presentation, I would like to respond to Mr Laughren over here. He was mentioning Elliot Lake, the demise of the mines and the financial arrangements that were made. That's very nice, but I believe you know, sir, that Ontario Hydro hired quite a number of the Denison Mines employees, who are unfortunately now again out of work.

The other item I'd like to mention at this time, if I may, is that I've taken the opportunity to watch you people on television. You look much better in life than you do on TV. The thing that bothered me was that after watching what went on yesterday and the talk with Mr Machon, it sounded to me as though decisions by the Ontario Hydro board are being made very quickly, in my opinion too quickly. Also, it seems to me that some of you people sitting in this room were not getting very satisfactory answers. That is not in my report. This is my observation of your programming. I just wanted to mention that. You asked the warden a few minutes ago his opinion of what to do. Sir, reactivate Bruce A as fast as you can.

*Interruption.*

**The Chair:** In light of that applause, Mr Laughren will not run against you in the upcoming election. I can give you some comfort about whether the committee was always pleased with answers that were forthcoming from witnesses. My experience is that the members of this committee are extremely well prepared and knowledgeable. They simply take the answers as they're given and continue to do their own examinations behind the scenes. I

appreciate your comment, but I want you to rest assured of that. I have great confidence in the membership of this committee.

**Mr Mann:** Thank you, Mr Chair.

**The Chair:** We will begin the questioning this time around with the distinguished member from Sudbury. We'll go directly to Mr Laughren.

**Mr Laughren:** Thank you, Mr Mann. I wanted to comment briefly first, before I ask you a question, on your comment on page 8 of your brief, "We...are prepared to support Hydro, provided it is prepared to reconsider its decision and look at some of the alternative business plans which we know have been suggested to Ontario Hydro and this committee." That's true; there were a number of alternative plans laid before the Hydro board on August 12 of this year, as you might know. The Hydro board made a decision on that same day on the plan that they would proceed with, which of course means laying up Bruce A and Pickering A and closing the heavy water plant.

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The reason they give, and I just went and dug it out here, that they cannot do what they call the all-at-once scenario — in other words, just dig in and repair and do what's necessary but keep the systems going, including Bruce A — is, "The likelihood of success for the all-at-once scenario" — meaning keeping them all open — "is nil, due to the following reasons: (1) managerial capability and systems, given size and complexity of the scope" — in other words, just too big a job — "(2) the lack of qualified resources; (3) impending material conditions issues; and (4) seriousness and volume of the process deficiencies."

None of us works in Bruce A or Pickering A, so we don't always know exactly what we're being told when we're given information like this, and I'm wondering whether you have reason to doubt that conclusion. You're not a nuclear physicist either, I don't think — or if you were, you wouldn't have been elected that long in office — but I'm wondering if you have reason to doubt, given what you know — I'm not an expert either, so I'm not trying to put you on the spot that way — that conclusion the Hydro board came to.

**Mr Mann:** Having just heard this tonight, I have a concern that they're being too hard, if I might use that word. As far as I understand it, Bruce A units 3 and 4 probably need some minor repairs. Bruce A unit 1 probably needs more major repairs, as I understand it. Number 2 is a sick duck and needs major, major repairs. But it's my understanding that with a little effort 3 and 4 could be back in service reasonably soon, and while they're running why couldn't we go back and fix 1?

**Mr Laughren:** I asked the people who are expert in this area why they couldn't just close one reactor at a time and fix it, and they claim no, they can't do that. I can't remember the technical words they used, but that just wouldn't work, it didn't make sense. I have no comeback because I just don't know enough to respond to it.

**Mr Mann:** I find I'm in the same boat that you're in for this.

**Mr Laughren:** You don't want to be in the same boat as I am.

**Ms Couture:** I understand they want to deploy the staff from Bruce A to Bruce B to make Bruce B operate to the efficiency level that is desired, and they can't afford to just hire these extra 3,000 people who will be needed to do both plants at once. The town of Kincardine's position has been, and we've written to the board of directors of Hydro as well, and everyone else in Ontario it seems, to open Bruce A first. We understand that maybe it has to close for a while. It's being closed up wet; it needs new tubes.

**Mr Mann:** Bruce A is dry.

**Ms Couture:** Dry; sorry. But when the time comes to reopen, and this is what our concern is, we don't know if that's ever going to happen.

**Mr Laughren:** We don't either.

**Ms Couture:** We can wait three years. We can suffer through three years. We can't suffer through 30.

**Mr Laughren:** Hydro will be very honest with you and tell you that they don't know that either because it will have to meet business plan criteria, if that's the right language, at that point, that it's the best solution for the new supply of energy that's required other than, for example, gas turbines and so forth that the private sector will be chomping at to supply energy with.

**Ms Couture:** But we don't believe that the social and economic impacts of that decision have been included in the business plan, and that's of great concern.

**Mr Laughren:** I understand that. I think you're right.

**Ms Couture:** It's part of the equation.

**Mr John O'Toole (Durham East):** Thank you very much, your worship, for your presentation. Just to introduce myself, I'm from Durham, where they have the Darlington/Pickering plant and it's somewhat of a different kind of environment, I might say. I commend your very passionate presentation and the support of your community, many of whom work at Ontario Hydro, obviously.

I can tell you that Ms Fisher has made the case very strongly from her perspective and perhaps reflecting much of the discussion to Mr Andognini as well as the current board chair. In fact, I can recount, if you look at the record, that she asked Mr Farlinger directly if that very question of the social and economic implications was part of his consideration. I would let her speak to that a little bit later, but just to reassure you, your concerns have been presented I think very fairly and very forcefully as well.

I have a couple of questions. They're not meant to be critical, but they're meant to be from the perspective of being a visitor here. It is a lovely area. I was quite impressed with the site, really, and the recovery seems to be, in mind, if nothing else, under way. From what I heard from the leadership today, they seem to have a cultural kind of way of going through. But I see this as a kind of host community, more of a hostage community really, and it's a symbiotic kind of thing. There was always a window. That's a terrible kind of way to look at it, but there

was this window that was going to close some day, whether it's 25 years or 30 years.

The big issue I see is that all of the best scientists in the world — and even if you look at the financial statements of Ontario Hydro, the depreciation of capital was over 40 years — now are coming up with these factors that are questioning the aging calculations, the technical calculations. I don't think it's any kind of a conspiracy theory, despite the stranded assets of people here. I just wonder, is there that kind of sentiment here from the municipal planning side to realize that it's kind of like a mining community: When the gold is gone, the town's gone. I'm not trying to be malicious. Do you know what I'm saying? How do you deal with that kind of less-than-permanent existence?

**Mr Mann:** If I could attempt to answer that for you, the first thing I would like to mention is that we do support something called an energy centre out there. We have looked at that energy centre as a spinoff from the nuclear plants. If the energy centre proceeds, as it has been planned many years to proceed, I think the employment would at least be stable, if not go up.

**Mr O'Toole:** The last brief portion of our tour was through that and some material was given to us with respect to some of the issues. We were briefed by our staff with respect to rates and rate issues, and I suspect those are ongoing, as I understand it, even the supply and alternatives. We've been reassured, if you've been watching the discussions, that those discussions are under way now, with whom I'm not sure.

I just want to return to our mandate. Basically it had to deal with two factors. One was to assure the people of Ontario, in the very broadest perspective, of some certainty of safety. I'm sure everyone here at this table would agree that's an important mandate that should not be embellished in sentimental concerns, not to diminish the importance of those concerns. Safety is what I understand to be a factor of risk and that's what this Andognini report's about. It attributes some of that to some human resource issues. Whether there's a cultural kind of apathy — I'm not sure how you describe it — I sense that's in the language in these reports. So I've got something around the safety and the cultural thing.

But the other part of our mandate really is the debt. If people were to say to me this crown corporation was properly managed for the last perhaps 15 to 22 years, somewhere in the Darlington startup phase, each one of us shares in that cost. We're all sort of shareholders, and I'm not for throwing another \$8 billion in. Initially, my response is to say, "Well, they've had so many recovery plans it would make someone tired carrying them around; none of which have been delivered."

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**The Chair:** Thank you, Mr O'Toole.

**Mr O'Toole:** I'd like to comment on that, if I could.

**The Chair:** Very quickly.

**Mr O'Toole:** Do you think they can deliver on a recovery plan, or is there so much depth of cultural kinds of impediments that it's impossible?



**Mr Mann:** I believe they could deliver, yes. I believe they honestly could deliver if they had the —

**Mr O'Toole:** Do they you need an American team here to lead it?

**Mr Mann:** That's a leading question, sir.

**Mr Kwinter:** Mayor Mann, I want to talk to you as the mayor but also as someone who spent 41 years in the nuclear industry. Of all the experts that have appeared before us, not one of them has questioned the safety of any of the nuclear reactors. They have questioned the poor technical maintenance that may lead to safety problems. That's what they're trying to address, and the AECB has identified that over a number of years, but no one has said that anybody is at risk because of the units that are now there.

As someone who has spent all this time in the industry — we have a situation where there are no brownouts or blackouts in Ontario, so the combination of the nuclear energy and those other hydro-electric generators that are churning out electricity are delivering power to the province right now. The base load is relatively stable. I agree — I'd like to get your comment because you have been in the industry — and it would seem to me that there should be every possibility of phasing in the retubing, or whatever it requires, of the facilities that are having problems, and still continue to deliver the kind of power we're getting now. Do you feel that, as someone who has been in the industry?

**Mr Mann:** Yes, I do feel that. I feel, and I've already mentioned it once this evening, that I just don't understand the report Mr Laughren was reading where they say they can't do it. I believe they can probably run 3 and 4, fix 1, fix 3, fix 4, and then the last one, which is the toughie, would have to be fixed last. In my experience, for what it's worth, in a much different type of unit, the reactor calandria of the NRX reactor at Chalk River were completely replaced and the plant back in service in 14 months. If they could do that with the antique equipment of those days, surely with modern equipment retubing should be a snap.

I have been told that even with Pickering, when they were retubing Pickering, the first unit that was retubed took a fair length of time. I can understand that and I'm sure you can. You're dealing with a lot of unknowns, strange equipment, what have you. But I've also been told that the fourth unit retubed was done very much more quickly. So I'm saying to you, sir, that the expertise, I believe, is still available and the time could be minimal.

**Mr Kwinter:** Are you familiar with the letter the chairman of Ontario Hydro wrote which appeared in the *Globe and Mail* today?

**Mr Mann:** No, I'm sorry.

**Mr Kwinter:** Can I just quote something for you and get your comment on it? In it, he's responding to an article written by Terry Corcoran, who is a columnist for the *Globe and Mail* and who was commenting on what was happening. He said: "The bulk of the costs are for replacement power over the next five years. We expect it to cost more than \$2.5 billion to replace the electricity that

would have been generated by the seven laid-up nuclear units and this figure will continue to grow if any of these nuclear units are not returned to service. This cost alone underscores the importance for Ontario Hydro's nuclear recovery plan." Then he goes on to say: "It may also be necessary to write off the laid-up nuclear facilities (book value of \$3 billion) bringing the total cost of the recovery program to \$8 billion." Then, in closing, he says, "It was only after a careful consideration of the options available, that the board concluded that the nuclear asset optimization plan offered the best path forward for Hydro to return to world-class standards in its nuclear operations."

In your opinion, do you think that he is stating the facts, that after they examined all of the options they made a decision to go ahead with their particular plan?

**Mr Mann:** Not having all the background, I would say that to rebuild and put them back in service is the way to go and it should be done as quickly as possible.

**Mr Conway:** Hydro, at all senior management levels, tells us that they just don't have the people to do that. You live up here. This is a pretty big nuclear community. What do you have to say to Hydro senior executives who say, "We can't do it because we just don't have the people"?

**Mr Mann:** There are two ways I would look at it, and I'm just a politician like yourself. I would suggest maybe contracting out could handle it. Also, I would suggest that there is a possibility that there are enough people if they are used properly. Of course, I don't know what the staffing is any more. I'm sorry I can't respond to that.

**The Chair:** Thank you very much, your worship. I appreciate your time. Please stay at this table. There will likely be some more questions if we have some time, but let me move now to the —

**Mr Conway:** Is nobody going to ask the mayor if he's going been acclaimed?

**The Chair:** I don't think Mr Laughren wanted to go there. Let me move by there very quickly, since we've all been pinned back for being politicians.

Let me move on to the town of Port Elgin. Mr Mayor, we are in your hands.

**Mr Van Bastelaer:** I can say one thing: It's very difficult as a politician to sit to the very last and not be able to say anything. It's not an easy thing to do. I would like to thank the committee for attending this evening and coming to Bruce county, one of the finest areas in Ontario. On behalf of Port Elgin, I'd just like to thank you for coming.

Port Elgin, as a community, is a town of 7,000 people which grows to roughly 10,000 to 15,000 people in the summertime with tourists. About one third of that workforce is either directly or indirectly involved with the BNPD site. With that type of involvement, and you can see the type of support we have in this area, we have a lot of members from our chamber of commerce, our business people, citizens from outside of Ontario Hydro that are here this evening to watch and to listen to what's being said this evening, to show their support in this area and also to support this committee and their mandate and their presentation.

I'm sorry I haven't got a handout for you this evening. I can get a copy to you if you wish. One thing about being the last to speak is that a lot of the questions have covered a lot of the material I was going to speak on this evening, so I'm going to try to go through it quickly.

We are very similar to Kincardine. We are both residence headquarters of the BNPD site, which meant that employees were geared to move to that area; that's why the high percentage of workers in that area. I may say from the community that I think we are all aware of change that has to happen in the industry. Needless to say, we have experienced a lot of change within the municipalities, with Who Does What and all that. We are experiencing change and we can deal with it. We can understand why Ontario Hydro has to go through change.

If I could just talk a little bit about Ontario Hydro and some of the things that are happening with that and the way we see it as a community, I've looked through your terms of reference and we've worked together to try to give you a presentation. We tried to stress your terms of reference.

The first thing I would like to highlight at the very beginning is the safety of our Candu system. We are highly supportive up here of the safety of the Candu system. It was referred to in the IIPA as a "robust operation." I think we have proved with our workers that Bruce A has been a real workhorse for Ontario Hydro. I don't know if everybody knows — I know it hasn't been said this evening — that unit 2, which just came down, actually ran for 360 days of continuous service before it was shut down. That is a proven track record that this system does work and does lead to the standard of living we now have in Ontario. A lot of our reactors have been in the top 10 performers in the world. I believe, and the community believes, that this is an asset worth saving for this province and its residents.

One thing that has not been mentioned this evening also is the heavy water plant. When the Bruce heavy water plant first opened in 1973, D<sub>2</sub>O, heavy water, was a very scarce commodity. After a short learning curve, that plant and its employees at Ontario Hydro put that plant together and it became the world leader in production of heavy water. We are known to make the best quality and highest purity of heavy water in the world. It was sought not just for the Candu system but for scientific and research facilities also. So I believe that Bruce A heavy water has worked hard over the years to contribute to a certain standard of living in Ontario.

#### 2030

Also tied in with Bruce A is the energy centre. There is low-cost steam that is supplied to this development and previous governments have contributed to this in the way of sewer, water and steam to the industries. Previous governments in our local area have seen the benefits of this, not just for our area and the jobs it creates but for the environment. People could see that we had waste heat. That waste heat could be used and it could be used productively to help as renewable energy. That type of support was there, and that was supported by Bruce A.

Bruce A, the heavy water and the energy park were all interconnected over the years. I think that should be highlighted, that they were interconnected. It was the family that was put together to try and build an area into a viable option for Ontario.

It was stated that Bruce A will be laid up, with heavy water as a casualty. I'd like to stress to the decision-makers, through your committee, hopefully, that the whole package must be considered before any final direction is made for our future. We cannot make rash, quick decisions on this type of situation. It took us many years to put this package together as a viable energy area. We can't squash it in six months and say it's not viable. I think the decision-makers have to look at the whole picture, the economic and social involvement up here.

I can understand why we have to be competitive. This is a world of change and we are opening to a major market, so change does have to happen. We do have to produce a product that generates revenue, there's no doubt about that — that's been brought in front of your committee — and we do have to improve to world excellence. I believe nuclear power is competitive and I believe our community believes that to be so. The people in this province relay the power and there is an open market that will surface on the horizon.

I believe we have to look at it from a business perspective, but it is imperative that we look at the social impact on the area also. Look at the whole picture. I know the business case of Bruce A is probably not as good as Pickering if you're looking strictly for dollars. If you look at the Pickering situation, there are eight nuclear reactors built right in a city of 200,000 to 300,000 people. They are now asking for an environmental assessment if we reissue or restart any of those reactors. This could have a major impact on the future of Ontario and its residents. We have to consider all these things. I'm just trying to highlight all the things that have to be considered before we make the decisions.

I think we have a viable option in Bruce county. We've talked about it before, and maybe quickly I'll go through this. If we can run units 3 and 4 at Bruce A in a way that is safe — and I have no doubt they will be run safely — we can protect the environment. There will be less purchase of external power. It's cheap power. The place has been paid for. It's a sure supply. As was mentioned here, we do not have any brownouts or blackouts in this province. Because of our track record to date, we don't have this.

I believe the staff here are dedicated. I've seen them; I work out there. They are dedicated to bringing this area, these units to top level. It's been mentioned before, do we have the staff? If we double up the staff on two units and fix up two units, will that not be enough staff to get two units going? We need people at Bruce B. Bring some people from Bruce A over to Bruce B. Why can we not balance on site to maintain this type of reliable service? I believe we can.

I'm going to run away a little bit from my presentation, but this evening we were talking about an \$8-billion



recovery. We've increased our efficiency in retubing so it takes 50% less time. From what I'm hearing, we can retube for \$2 billion to \$3 billion. I'm not that knowledgeable on the numbers, but \$2 billion. Does it not make good business sense to invest your money in an asset that can be retubed and rebuilt and could last for 30 to 40 years, instead of laying it up? I would equate that to, let's say, if I'm a landlord and I own a house and my roof starts to leak, do I walk away from the house and say it's not worth renting any more? As a landlord, I would replace the roof and I would rent it again, and maybe ask for a little bit more rent because I've improved it.

I think it's important. This is an asset that has been paid for by the province. Why would we want to put it away? I think we have to look at the whole picture. I think this community is really dedicated to that and wants to do that, and I believe the employees want to stay up here and do that type of improvement for our province.

I believe the committee can bring some of these considerations to the government and to the board of directors. I have not watched a great deal of your committee. It seems to be a busy time of year, between elections and changes within our municipality, but I believe this committee can bring recommendations. The IIPA has identified needs, but I believe all aspects must be looked at to come up with a complete picture. The province has thrived on cheap, reliable power. That still needs to be maintained, but also with consideration for the environment and society as a whole.

At the beginning, I stated that the system is robust. The Candu reactor has inherent systems in place to protect the community and the environment. I have no doubt of that. Workers work here and they bring up their families here. If you bring up your family here, then you do feel this place is safe. They are concerned about safety for themselves and the local area. That's why they work here. The entire system is safe and will continue to be safe. Some of the process, I admit, will probably need reviewing, and we are doing that at the present time. We're going to streamline and ensure that this safety is maintained into the future. Management and workers are committed to safety and I'm certain that standards will be improved and will be maintained at world levels if given the opportunity.

Next, I'd like to bring in just quickly the two other riders that were talked about in the last couple of years. I'm not sure if you're aware of them. First of all was the ITER. That is actually a fusion process. It's the opposite to ours, where we're talking about fission. We have an abundance of  $D_2O$ , we have an abundance of power, we have a large land mass and area with the right amount of people, and we have transportation and communications. We have all the necessary components to support an ITER project. If we start shutting down and not looking at this for our future, it could also hinder the whole of Ontario. This is a huge project. The federal government has been involved in certain aspects, the provincial government has been involved, and Ontario Hydro. We should not lose that fact and that should also be taken into consideration.

There has also been the MOX fuel, which is uranium-mixed oxide, dealing with plutonium. Canada has an opportunity to turn a nuclear-grade weapon into something that's useful until it's removed from the environment. We should not lose that. Bruce A has been a big part of this whole endeavour, so we should not lose that initiative.

These are all things we've talked about together. Since I was last, there were some questions that came up that I would like to address. There was one question on housing. There's no doubt that housing is going to be a major impact on this area. Losing 1,700 jobs, it's very difficult to be able to sustain viable housing and not have a major impact on our area. Like my fellow mayor here, Charlie Mann, we've put in infrastructure and we've supported Ontario Hydro through this. We've put in the water treatment plants, the sewer treatment plants and the municipal affairs requirement for 20% development land. These are all things that have to be considered. These are things that are an impact on our area. We need to work with it.

One question too — I'm looking through my notes — was the impact on Hydro and our taxes. We have an impact grant, and for Port Elgin alone it's \$285,000. Out of our operating budget alone that's 10% of our tax base. These are all things that impact us as a community. I'm appreciative that you've come up to listen to us on these issues. I think it's important. I think people want to stay at the BNPD site. They support it and I think it's the best thing for Ontario.

2040

**The Chair:** Thank you, your worship. Another announcement: Mr Laughren will not be running against you either. We appreciate your comments. Feel free if you have any other notes that you want to add on. This applies to all of the municipal representatives. If you have other notes that you want to add on, please get them to us, if you can, within the week. We would welcome receiving that.

I'm conscious of the time. I know we have another group of panellists that wishes to get at us, as well they should. We'll begin the questioning here with Mrs Fisher.

**Mrs Fisher:** Thank you very much, John, for being here tonight and describing the situation, as we've been trying over the number of weeks to do so.

I would like to lay out a scenario for you, if you will, and see if in the end I'm off the wall or I'm on the right track. I think it's something Mayor Mann referred to tonight. When I came in, he held me aside and said he saw the version of this yesterday and felt perhaps I wasn't getting — I think he used the word — "truthful" answers.

**Mr Mann:** I said I didn't think you were getting the answers you were looking for.

**Mrs Fisher:** Let me lay out the scenario like this: We're pretty aware of the fact that in 1993 this community got what's known as the golden handshake, a strategic planning layoff of employees at Ontario Hydro. It impacted our community to the tune of 708 workers. Over the course of the hearings we've established that it really wasn't strategically planned, those who should have been selected for the right reasons, be it coming retirement and being offered the opportunity to say yes or no, be it for

other reasons that they might have been considered. I think the general feeling when the panel from the 19th floor of Ontario Hydro was here was that it wasn't strategically planned. Mr Strong presented himself before the committee and did not deny that.

I think there's an opportunity there to hire back some of these people. I can name three people on my street, for example, who I think would be very happy to have that opportunity. Starting with that, I believe there's a market of Ontario workers here who could be hired back. I want to go through things, I don't want to belabour it, but would you agree with that?

**Mr Van Bastelaar:** Very much so. We need resources, we need to plan. I totally agree that we did not plan in 1993. As an industry right now, our average age is approaching 40 to 45 years old, which is a dying industry. We need to look at resources and I know that Canadians are resourceful enough and there are intelligent people around that we could look at.

**Mrs Fisher:** Let's start at home first. I think there's a market there. Yesterday I challenged the presenter to bring forward that list and see who was available. The IIPA dwells specifically with regard to a human resource management issue. I personally believe there's a backyard of them.

Taking it from there, I am aware of a study that was done locally by site management right up through the senior site manager and promoted to Ontario Hydro corporate offices in 1996 that talked about equity participation by private sector, not in an ownership mode and not in a takeover of operation mode, but money introduced to the system to help offset the need for capital repair.

I put a proposal yesterday: We were presented with some statistics financially that talked about the recovery cost; \$2.1 billion of the report is designated to replacement fuel costs. I know that the retube costs of Bruce A are \$1.2 billion. I also know that on the pressure tube refurbishing we run in the range of \$600 million per unit. If we accept the fact that unit 2 is not going to come easily and somewhere down the road, and if we know that one third of the cost has already been expensed, then we're left with about \$1.2 billion on the retube issue. Our total refurbishing package of Bruce A would be \$2.4 billion.

When I raised to the gentleman the prospect of, instead of purchasing \$2.1 billion of replacement fuel, as the mayor has suggested as well, chronologically going through and revisiting each of the units — unit 1 is in a shutdown state today, not quite to a permanent layup. If the work was done in units 1, and 3 and 4, which have been designated as safely operating units today by AECB, the question was, why wouldn't we revisit the consideration for operation of A, instead of investing not only the \$2.1 billion and the additional scrubber fees for thermal burn, which is not acceptable in our backyard? Can you agree that might be something that as a community we could work together on as a proposal for Ontario Hydro's consideration?

**Mr Van Bastelaar:** Most definitely. As a municipality right now, we are looking at partnerships in our own

organization for anything from water treatment plants to recreational facilities. If I get you correctly, partnerships are a viable option for us.

Let's look at it from a purely business point of view. If I'm a private investor and I'm allowed to get a certain return on my money, then I'm willing to invest. When you look at a nuclear plant or an energy-generating plant, it's a guaranteed market. What comes out of the end of that reactor is guaranteed. People need that. I think we can offer that guarantee and work with partners. That's a possibility. There are all sorts of possibilities.

But the bottom line is economics. If we're talking about replacement energy, we do need the energy. This province is growing at the present time. If we're talking brownouts and blackouts, that's not going to attract any type of industry to our province. We need to make sure we can replace it with the best type of energy costs.

**Mrs Fisher:** I just want to ask one more question.

**The Chair:** Very briefly, Mrs Fisher.

**Mrs Fisher:** It refers back to one of the points Ms Couture made and relates to the issue of appropriate timing. I think we all understand and accept the fact that we may have to go through a marginal shift here. We understand we have to bring nuclear excellence back to B and it's going to require some human resource assistance to do that. I think there's an opportunity here to work them through together. If we can make the point — Mr Farlinger made it at the public process, and Mr Andognini made it at the public process and again confirmed it to me today — that if we can come with a business proposal to meet the needs of the electricity demand and the refurbishing, it would be in the best interests of this community as well to see that happen.

**Mr Van Bastelaar:** Very quickly, in municipalities the mandate for a councillor is to look into the future and plan five and 10 years down the road. Hydro needs to do the same thing for us.

Let's look at the average employee out there. If that individual knew they were going to be able to retube or Bruce A was in the cards, we would have a dip but we would come right back up again. People can make decisions in their lives. Let's look at the social impact we have here. If they know they can make a decision on their lives, their homes, their lifestyle, and our businesses can make a decision, we need to know that now. We don't need to know five years from now. The cost of moving people around and the cost to individuals is tremendous. We need to know a little bit more now.

**Mr Conway:** Mr Mayor, you said that it's the duty of a municipal leader to look into the future and I think that's very good counsel. One of the major realities just on the horizon is, by all accounts, the advent of a competitive market for the generation of electricity. The Ontario press yesterday reported that the government is soon to release a white paper, which this committee is very much looking forward to, on electricity reform that, according to authoritative sources in the government, is going to break apart generation from transmission at Ontario Hydro. That will be the recommendation. I have in front of me the



Macdonald commission on electricity reform which was released a year ago.

There seems to be a developing consensus that we ought to have a competitive market for the generation of electricity. I'm just wondering whether you and any of your colleagues on the municipal panel have given any thought as to what that might mean for the intermediate and longer-term future of particularly the rehabilitation of Bruce A.

**Mr Van Bastelaar:** I really believe in our system and I think that if we work together as an organization we can generate electricity from Bruce A at a very competitive cost. If we look at the open market and try and predict in the future what that open market will mean — when you look at the eastern seaboard, they're paying seven to eight cents a kilowatt-hour for power. If we can generate it for two to three cents, any businessman can see that's a profit we can make. I believe that with our Candu system, with its proven track record, and with the employees we have and the resources we have, we could certainly become very competitive in the open market.

2050

**Mr Conway:** Are you not concerned that — I think it was your colleague the mayor of Kincardine who said that Hydro made a 40-year commitment to BNPD and now it appears to be a 20-year commitment. Part of that appears to be that there have been some difficulties with the on-going operation of the facilities. For reasons that I think we're all familiar with, the plants just have not, whether it's Bruce or Pickering for that matter, performed to the level that was advertised 15 or 20 years ago. If those performance standards don't improve and the domestic competition is going to be gas-fired electric, that competitive marketplace may put some very real pressures on not just Bruce but everyone else in the marketplace.

**Mr Van Bastelaar:** That's very true, but I believe we could produce just as competitively. I've seen the workers out there and I know we can turn it around. This means commitment and work on part, but if we retube and refurbish Bruce A and possibly even the heavy water plant coming back up again, which should be considered also, we could be competitive. I have no doubt that we could be.

**Mr Conway:** Do you have any advice to the committee? One of the things that we're going to have to consider as we make our recommendations is this new policy framework. The context in which electricity is going to be developed and delivered over the next few years is going to be a different environment than we've seen for much of the postwar period. There is going to be a white paper on electricity reform. It's certainly going to have a major impact on the province and on what this committee is going to be recommending, I think. As the mayor of Port Elgin, particularly thinking about the situation at BNPD, what if any comments would you have to the committee about provincial policy around reforming electricity policy, changing electricity policy?

**Mr Van Bastelaar:** We have to change and definitely the electricity policy within North America is changing. If I could talk about this community, let's make that 20-year

commitment back into the 40-year commitment and let's do that for the sake of the area. I believe this area has human resources, we have natural resources, we have communications, we have transportation, we have all that here. We have to be prepared for the new market. I guess Ontario Hydro is going to look at it more as a whole. We bought and paid for this facility out there and I think we can use that facility for the benefit of our province and for the residents if we turn around and we make that a class project, and I think we are moving in the right direction. That's what the IIPA is saying. I think we can do that but I think a better business case is to do it up here.

**Mr Laughren:** I appreciated your presentation. I'm going to tread into some very dangerous water here and I hope that you and all the people who applauded for you won't string me up at the end of the evening. I think you're doing the right thing, by the way, fighting for what you're fighting for on Bruce A. But as Mr Conway indicated, there's a very strong sense out there in the province that it's a new world in the energy world and if, after three years, the competitive bids coming in to supply energy are such that it makes the reopening of Bruce A extremely difficult — if — then I would ask you to think — you made the comment about thinking ahead and being responsible; I agree with that too — that at some point there's going to have to be, it seems to me, an obligation to communities such as this that, if there are new sources of energy, this would be where they should be located. Do you follow me? Because the grid's here and so forth. I don't want to imply that I'm encouraging you to give up the fight now — that's why this is dangerous water for me to be in here — but rather, if at the end of the day, you have your folks thinking ahead about if that day comes, which I know you don't want, but that you be in place ahead of anybody else to be part of that new world of gas-fired generators, if you will.

That's the only comment I wanted to make because I think most of you are aware; we all represent communities and we know what it's like. I live up near Sudbury and we had the hell kicked out of us about 15 years ago. It is truly brutal in a community, what it does to families. It really is awful. I think there's an appreciation of that by most members on the committee who understand that. I would conclude by just wishing you well.

**Mr Van Bastelaar:** If I could just comment, I totally agree with you and I thank you for your honesty. I would like to make a simple comment. Give us a try. Let us give it a try. I believe the management and the workers are committed to this, and we will turn it around. I've seen the change and I think that change, if given a chance and planned for, will work.

If you want to take it to the further scenario, if it isn't a good business case, then I still think we do have the human resources in the area and the land and the transmission lines that the government — they haven't made a commitment to the energy part. If that doesn't work in the future for long-range planning, then please look at our area for other possibilities. I really would like to stress that our area is important. Businessmen have made a

commitment to this area, as have private citizens, along with Ontario Hydro. Please remember us when we go through this, because, you're right, it is a tremendous impact on our area and we cannot leave the social aspect out of it.

**The Chair:** Your worship, I thank you very much for your presentation. Mayor Mann, you were trying to get my attention?

**Mr Mann:** Yes, I was, Mr Chair. A few minutes ago somebody said something about the 20-year, 40-year commitment from Ontario Hydro. I noticed yesterday on the program that there was a discussion with regard to power factors or capacity factors. I think you people all know what that means now; I'm not going to explain it. I was amazed to hear them talking of 85%. Gentlemen, I can remember plants at BNPD running at 98%, 97% on a continuous basis. Quite rightly now, I would suggest they were probably overdriven, but I think we've inherited what we've sown.

The other thing that I wanted to mention briefly was to agree with Mrs Fisher that the people who retired here with the golden handshake or whatever you want to call it are still here. They live in Kincardine and they live in Port Elgin. Perhaps Mrs Fisher has an idea that should be looked at for manpower.

**Interjection:** Mr Chair.

**The Chair:** I'm going to just very quickly let you respond if you need to. I do want to make an appointment to the councillor, who was trying to get my attention as well. Go ahead.

**Mr Mielke:** The IIPA report stresses that Mr Andognini just hasn't got the manpower to refurbish Bruce A and also Pickering. Not too long ago Ontario Hydro construction forces completed Darlington. They also completed the retubing of Pickering A, and it was a complete retube job on Pickering A. I am sure some of those people who were working at Pickering and at Darlington are still looking for employment right now. I am sure they would be more than willing to come back up here to the Bruce and retube units 1 and 2 as required and do it in parallel, as units 3 and 4 are still operating and producing power at a lot cheaper rate than what Ontario has to purchase.

**The Chair:** Councillor, thank you. Would you pass along to the reeve — we've done a very quick check here — regarding the request that your emergency response coordinator have a chance to speak to the committee, that I've been able to determine that there is a window of opportunity next Tuesday at 2 pm, and if you'll make sure that your reeve checks that out with our clerk, we'll try to make that happen. That's Tuesday at 2 pm. That's just how quickly this committee works.

**Mr Mielke:** Excuse me, does he know where it is?

**The Chair:** Please, just speak with Donna. She'll be very happy to give you the directions, or follow the bread crumbs all the way to the room.

**Mr Conway:** It's a big pink building in downtown Toronto.

**The Chair:** Mr Kwinter, very quickly. I'll allow other members a very quick response to anything else here

while we have the mayors at table, but keep this in mind: We're eating into the panel of Ontario Hydro employees.

**2100**

**Mr Kwinter:** I just wanted to reply to Mayor Mann and give you an explanation that we got today at the Bruce nuclear centre. There's no doubt that the reactors can get up into the 90% range, but the net capacity, because of planned outages and sometimes unplanned outages, averages out, they're calculating, somewhere in the 80 range. That doesn't mean that the reactors themselves aren't operating, when they are operating, up in the 90-plus range. It's when you calculate in the outages that it averages out at that range.

**Mrs Helen Johns (Huron):** Can I ask you if this sheet was derived from someone in this group? I know that this is probably too long a question so I'll just kind of figure it. Can you tell me how you calculated gross primary income lost? I don't have my glasses on, I'm sorry. I think it's \$68,000 by the number, the population decrease.

**Ms Couture:** This sheet came from the Bruce Community Development Corp, Lauri Cunningham. I believe she's addressing the committee tomorrow. I'm sure she'll be bringing this. She gave this to us to show us some impacts and I'm sure she can explain it very fully.

**Mrs Johns:** If she's not addressing this, could you get us the background on how she calculated these numbers or how these numbers were derived, please?

**The Chair:** What you might do is give her a call tonight to let her know —

**Interjection:** She's here herself.

**The Chair:** Good. Then she's made a note that Ms Johns will be watching tomorrow. I see the fingers pointing. Give her a break, she's on deck tomorrow. Ms Johns will be ready to ask that question tomorrow. Thank you very kindly.

On behalf of the committee, I appreciate the time and the interest taken by each and every one of you. We're most appreciative of the thoughtfulness you've put into your preparations. I can assure this committee will give it all the consideration we can. I appreciate your time tonight. You're excused. Thank you so much.

## ONTARIO HYDRO EMPLOYEES

**The Chair:** I ask the panel of Ontario Hydro employees to please come forward and take your places at the witness stand. That's Harold Hergott, Robert Diamond, Tim Morgan, Ken McGuigan, Jake Hunter and Frank Morris, six members, and we have slightly less than an hour now to deal with this. The one thing I would ask as you're preparing yourselves for presentations is that we have written documentation from some. You don't have to read it all. Feel very free to truncate, collapse and go directly to the essential points, and be assured that members will be reading the deputations. Otherwise feel free to cut directly to the quintessential issues, and then we can get on to questioning, which you may find every bit as profitable.



**Mr Galt:** On a point of order, Mr Chair: Can we have all three presentations right off and then do the questioning afterwards?

**The Chair:** We can have all those who wish to present, yes. I have six at the table, Mr Galt, so I will ask. Are all six presenting or will there only be three presentations? How many presentations will I have? That's six. Thank you so much.

I will run a very tight ship now in terms of timing. That's not to be discourteous but just so that we can get through this into the question period and give you more time for answers. For the purposes of Hansard, let's start identifying yourselves.

**Mr Harold Hergott:** Good evening. My name is Harold Hergott. I'm an authorized nuclear operator with Ontario Hydro.

**Mr Ken McGuigan:** Good evening. My name is Ken McGuigan. I am an authorized nuclear operator at Bruce A.

**Mr Tim Morgan:** I am Tim Morgan. I am an operator at Bruce A.

**Mr Jake Hunter:** Jake Hunter. I'm with maintenance at the heavy water plant.

**Mr Frank Morris:** I'm Frank Morris. I'm a supervising nuclear operator at Bruce A.

**Mr Robert Diamond:** I'm Robert Diamond. I'm a planning tech at Bruce A.

**The Chair:** Thank you very much. Can we begin? Try if you can to keep yourselves within three or four minutes, and then we can move on to questions.

**Mr Hergott:** Thank you, Mr Shea. I observed a couple days of your sittings last week, so I'm going to key on three basic areas that I think I can help the panel with and leave it to you to ask me questions on them.

When you did the plant tour today, if I had been on the duty shift you would have seen me in the control room. That is my normal job, to monitor and operate a reactor panel. I think you're aware of the licensing program we have through the Atomic Energy Control Board. That's my background. I have 17 years of sitting in the control room doing that job, and another eight with Ontario Hydro, getting there.

I'm here for three reasons. With all the talk about Ontario Hydro and what's going on, and the cults and the people, I thought you should meet a person who runs a reactor and have a chance to ask me any questions you want. I'll answer anything I can openly; nothing is sacred.

The second area where I think I can help you is to share some more insight into the viability of PWU's plan to recover all the units that they presented to you early last week.

The third area is, as a recipient of this bad labour-management relationship, as an employee out there on the receiving end of it, I think I can shed light into that relationship right now and what I'm seeing in the workplace.

Those are three areas where I think I can help you. I leave it to you to key on them as you wish. Thank you.

**Mr McGuigan:** Good evening, Mr Chair, ladies and gentlemen of this committee. I've been an authorized

nuclear operator for three years now. I am an elected authorized nuclear operator representative for Bruce A. I need to stress that that representation is outside of the PW. This is not a PW-elected position that I hold. I've had that position for two years. I represent the ANOs on positions that deal with authorizations issues, conduct of operations in the control room. I sometimes liaise with the PW if they need information regarding staff as well as management.

The purpose for which I'm here on behalf of the ANOs tonight is to give you some firsthand insight, if you care to ask questions, on the safety culture that's at Bruce A; the forward movement towards nuclear excellence that has existed and continues to exist within OHN, specifically Bruce A; the ongoing positive position the ANOs have taken to making improvements alongside management; and finally, our participation and our cooperation with the IIPA and our concerns with the results.

**Mr Morgan:** Good evening. I'm a nuclear operator at Bruce A and I want to get right to the point. I have four recommendations for this committee and I'm going to read them here from my notes.

I would suggest that to gain a true and accurate understanding of the state of Ontario Hydro Nuclear is beyond the scope of this committee. That's not an aspersion on anyone here but it's just too big a task. You don't have enough time. For this reason and others, I would recommend that an auditor general for Ontario Hydro be established, an independent auditor with a substantial budget and staff of experts. To investigate the operations of Ontario Hydro, it's desperately needed. The fiscal mismanagement of Ontario Hydro is so large that it is difficult to comprehend. It needs a bright light to illuminate what is really going on here. Something must be done to make Ontario Hydro accountable for how it misuses its resources.

My second recommendation would be to set up an independent review panel to monitor any restructuring of Ontario Hydro's power generation and transmission system. This would help ensure that any restructuring would be beneficial to the people of Ontario, would be financially feasible and sustainable, and would safeguard against abuses which could occur during the chaos of restructuring the system.

Third, please don't believe that the nuclear asset optimization plan is a plan to improve the operations of Ontario Hydro's nuclear stations. It could be more accurately described as a \$5-billion taxpayer subsidy to eliminate nuclear's market share in the electricity market and a plan to fix up fossil generating stations for privatization and to purchase power from neighbouring utilities and independent power producers.

My fourth and final recommendation would be to give Bruce A the green light to arrange a public-private partnership to redevelop its generating facilities. The employees are eager to make it happen. Major construction companies, boiler manufacturers and US power marketers are lined up out the door waiting to invest in Ontario and Bruce A. However, the Ontario Legislature is in the way. Please get out of the way.

2110

**Mr Hunter:** Good evening. I work at the heavy water plant. I have worked there for almost 25 years and the bulk of the time I've spent there working on maintenance. My presentation is very brief. The future of the heavy water plant is directly tied to Bruce A. We need Bruce A for the steam. But the reason I came here is that if the committee here has any questions regarding the heavy water plant, I'd be happy to answer them.

**Mr Morris:** I came here from the Hearn generating station. It had eight gas-fired units, and when it closed down I was offered a job to come to nuclear. I was told that it was closed because it cost too much and because of the environment. Now they're bringing out a plan and this board of directors has accepted the plan. The cost is way more, billions of dollars, and the second thing is that they've doubled the pollution going into the atmosphere. Global greenhouse gases have doubled. In 1995 our emissions were 15.5 teragrams. One teragram is a million tonnes. That's 15.5 million tonnes. In 1997 we went up to 20 teragrams — 20 million tonnes.

With this plan, it's expected to go 50% higher — no one's disputed that — which brings us to 30 teragrams, or 30 million tonnes, doubling our global greenhouse gases. That's not acceptable to me and it shouldn't be acceptable to you or the people in Ontario. I'd ask for an independent environmental review.

**Mr Diamond:** I have a brief talk as well. There is very little I can add to what has been said already, but I'd like to emphasize that I work in Bruce A. I produce plans. I have produced a strategic plan which is a longer-term plan. I have produced the daily plan for the operational maintenance and I've produced plans for the outage maintenance at Bruce A. But the bulk of my work is the daily operational planning.

I also agree with what's been proposed earlier by our representative in the union, the plan A to support the full nuclear recovery. I think this provides the best value and the best health and safety to the public.

Further to the staffing concern, I have a strong belief that we have enough ambition in our staff now to help out any new people coming in, whether they're from England or from the States or otherwise, to get them on stream. With the training required and with the new advances in technology, computer-based training and so forth, we can bring some of these people on line much faster. An example in point is the simulator training we have now. A lot of this is done on computer, and with our planning process we use a product called Primavera P3. It's a pretty complex scheduling or planning package. There are people out there in Ontario and other places who are familiar with some other products that can be converted over to this higher top-end product. That's my category that I'm familiar with. I think in that aspect of the staffing we can bring some people on line much faster than is perceived. That's all I have to add.

**The Chair:** Mr Diamond, thank you very much, and can I say to the deputants, thank you for cutting right to the chase and allowing us to get on with our questioning.

That's been very helpful. Let me begin the questioning with Mr Conway.

**Mr Conway:** Thank you, gentlemen. I was really happy to have the benefit of your testimony tonight. I want to cut to the quick, as they say. There are six of you there. You've all been working around nuclear power plants, I take it, for some time. I have a few questions.

First of all, how did you feel on 13 August when you watched the nightly news and the report out of Toronto that presented to the public of Ontario the assessment of what was wrong and the so-called recovery plan, and in that context the reference the Hydro chairman made that part of the problem with the management culture that had developed was that there was some kind of nuclear cult? If he said it once, he said it a half-dozen times. You're part of that cult, presumably, so tell me, what did it feel like?

**Mr Hergott:** I resemble that.

**Mr Conway:** Where I come from, Ralph Lauren is thought to be something of a cult.

**Mr Hergott:** The employees I saw felt much the same as I did. It was almost a disbelief. We cooperated with the IIPA report. We knew we had to improve performance. The results of the report are quite objective. They're findings and they're things that union people have been on teams and told management about. I've been part of those teams for years. Some of the findings were, verbatim, what we had recommended before needed to be done. What put the dissonance for people was, how could a board of directors make a decision like this with this consequence in that short a time frame? What options were looked at and were the consequences of choosing this really looked at? That's where employees had total disbelief that that could happen in that time frame.

**Mr Conway:** All right. Let me just stop you there and back it up a bit, because what I want to know, and this is an open question for all six of you — I've been around this Hydro debate a long time; I never thought I would see the day that I would hear Hydro people say what was said on 13 August. But it's very clear to this committee that over many years a lot of very good people with a lot of very good intentions tried to deal with some growing problems about the management culture, the operational problems around the nuclear power plants. For whatever reason, it just didn't work. We had the former president of the organization, Al Kupcis, who's someone I've known for a long time, say to the committee, "We tried but we just couldn't make it work." Why in the past could the problems not be fixed, from your point of view?

**Mr Hergott:** Our understanding at our level in the organization was that the layer of management above us was trying to address the issues and basically we were harvesting an asset. When I worked at Bruce A on unit 3 in the early years, we put number 1s up on the wall year after year — you might have seen them today — the best performing reactor in the world, but we didn't put any money back in. Then we went through a downsizing where we took people away. Our understanding at our level of the organization, as we howled relentlessly that things were



going bad, was that the level above us was passing it on but to no avail. That's my understanding.

**Mr McGuigan:** Along with what Harold commented there, I don't know how far back you're going. Are you going into the 1980s?

**Mr Conway:** I go back to 1975. I first started to pay attention to this when I was elected 22 years ago.

**Mr McGuigan:** Then you're going into the heavy-production-oriented way of life, okay? It's a new car. Unfortunately, it's tended to be driven without driving it to the garage once in a while, if you'll let me say that. It wasn't for the lack of the people and the workers in Ontario Hydro. Those reports are available, and I strongly urge this committee to ask Ontario Hydro for those reports. Authorized staff issues teams have made recommendations that would have staffed the control room to the numbers such that we would not be in that problem today. Those numbers, unfortunately, got involved and mixed up in 1992 when they were agreed to by management committees and authorized staff committees together. We came into this misperception that we needed to downsize. I would suggest that misdriving of these reactors was not at the local management level but higher up on that level where all of a sudden it was deemed that we didn't need to put the money into those reactors when the people knew we did.

**Mr Conway:** But if we look at the documentation the committees received from the Atomic Energy Control Board, the federal regulator, starting about 1986 when money is being applied — somebody at the staff level might help me. We had a former chief executive officer of Hydro say that in the late 1980s that we were pouring money into it — what was the phrase?

**Mr O'Toole:** Faster than we can drink it from a fire hose.

**Mr Conway:** I think that was the expression. From 1986 through to, say, 1991-92 the resources were going in, but according to the federal regulator — and we've got lots of very interesting documentation — it just wasn't getting any better. It didn't appear that it was just a financial resource question. Some people have said it was an engineering and design company that was really good at building these plants but there was just not a good operational ethic taking root in this company.

2120

**Mr Hunter:** If I may say, from my experience, because I've been through all that time with Hydro since 1973, I believe in that period when they did put a lot of money into Ontario Hydro, they tried to put it into a lot of things at once rather than focus on certain projects and finish them. I think they were putting money in, but they weren't focusing on major projects and doing them one at a time and working their way through; rather they were trying to do a whole lot at once. During that time I was on a number of committees to do with maintenance, and we tended to have hundreds and hundreds of initiatives rather than, say, a few that we would try to focus on. I believe that's one of the problems they may have made during that

period while they were spending more money but not getting results.

**Mr Laughren:** I appreciated the brief comments you made. There are two areas where I actually agree with you. One is that I think there should have been an independent inquiry into this whole thing, quite frankly, as opposed to this committee to look at Hydro's restructuring. Secondly, the environmental stuff: There's no doubt that if Hydro proceeds with their plan it's going to increase environmental pollution. Hydro made a presentation to us the other day — was it just yesterday?

**Mr Conway:** Yes. It's all right, Dad.

**Mr Laughren:** I knew it would happen sooner or later.

They said they will meet all the environmental standards that are laid out by law or that they have voluntarily agreed to with the Minister of Environment. I just wanted to make those comments. But I have a couple of questions.

I think it was the third gentleman — I lost track of the names; sorry — who talked about the massive misuse of funds by Ontario Hydro.

**Mrs Johns:** Tim Morgan.

**Mr Morgan:** That's me.

**Mr Laughren:** Tim Morgan, okay.

*Interjections.*

**The Chair:** That's one, two, three, four.

**Mr Conway:** We won't tell them that you're a former finance minister.

**The Chair:** Some of us are very much aware of that.

**Mr Laughren:** I don't feel sorry for you, because the abuse never ends on me.

Seriously, about the misuse of funds, one of the reasons some people — more than one or two, the same people who got Hydro into trouble are now saying they can save us, right? That includes the reopening of Bruce A and Pickering A. Do you see the possible ramifications of what you're saying when you say that?

**Mr Morgan:** I have two points. Ontario Hydro nuclear stations in particular are bought and paid for.

**Mr Laughren:** Well —

**Mr Morgan:** Or they're bought, not paid for. So what are you going to do? The asset is worth about \$30 billion? I'm not sure. Are you just going to walk away from it because people have misused the funds in the past? You can't. It's not an option. It's not realistic. But that seems to be what's going ahead. We're going to shut down seven of 19 units; we're going to walk away from a third of it. It doesn't make sense.

My second point relates to what Mr Conway was talking about earlier. Has any upper-level management person, anybody off the board of directors, ever been either fired or kicked off the board for incompetence or mismanagement of funds? I don't think you'll ever find that. That's the problem with Ontario Hydro: There's no accountability; there's no one peering over its shoulder except on safety issues, not on fiscal or financial issues, pointing to exact projects, capital projects, that are a waste of money, projects that should be coming in under budget instead of double the budget. No one is doing that and no one has done that. That's what needs to happen.

**Mr Laughren:** One of you mentioned also the downsizing issue, being taken out of the workforce. That happened in the early 1990s. I was part of a government at that point. I can recall the outrage of people when Hydro rates were going up 10% a year for three years in a row, as I recall. That was a 30% increase in rates, and people were outraged at us, including opposition parties in the Legislature, I might add.

**Mr Conway:** Agreed.

**Mr Laughren:** The reason they went up 30%, of course, was largely because Darlington came on stream. Under the system in Ontario, when the plant gets on stream, that's when it starts getting reflected in rates, not before. Before that it's capitalized. At that time there was also a moratorium on any future nuclear development. I was convinced, and I want you to tell me whether I was led down a garden path here or not, that the reason you could now downsize Hydro was because there were no more plants being built and you could get rid of the construction and design people in Hydro, which would be in itself a major downsizing. That's what I was led to believe when that was happening. Was I misled?

**Mr Hunter:** Yes.

**Mr Laughren:** I want an explanation of that, if I might.

**The Chair:** Well, you asked for an answer.

**Mr Hunter:** It was spread across everybody; it wasn't just construction and design people who were offered packages. Every group was offered them. In nuclear alone we lost 4,000 people. Oddly enough, from the IIPA report, I think that's what they say they're short.

**Mr Laughren:** Yes, that's exactly right.

**Mr McGuigan:** If I may make a comment as well to the comments made about Darlington coming on line at the same time, and going back maybe a little bit to the other question of why it wasn't happening coming up to this whole period of time around the downsizing issue, at that time, throughout the late 1970s and early 1980s, the United States did not have nuclear excellence either. It wasn't until after Three Mile Island that INPO was formed. They started having their conferences at that time. Their conferences were coming out with papers — papers the NRC directed those stations to act upon. Unfortunately, it was some six to eight years later before our industry in Canada got involved with these kinds of initiatives that were in the States. That's part of the problem of why it didn't gel.

As for the payment out of Darlington not being paid down on rates, I believe that was done through the Power Corporation Act. I believe that legislation was made somewhere back in the 1930s. It's surprising to me that wasn't relegislated prior to building Darlington.

**Mr Galt:** I'd just love to spend the whole evening with Mr Morgan and explore some of his philosophies, but we don't have time. But some of the things you were coming forward with are intriguing. The question I'd like answered, and it can be any member of the panel, reflects back to the Macdonald commission report talking about competition. Whether we like it or not, we're competing in

the international market today, free trade in North America, and certainly to be able to compete there we're going to have to similarly compete with electricity. I think that's the logical direction. Anyway, I predict that's where we're headed down the road, into competition with electricity.

How do you see the Power Workers cooperating on, say, Bruce A or Bruce B, whatever? As we move in that direction, looking at competition, we're going to have to have a very different workplace. We've seen that kind of thing in car companies. How do you picture the Power Workers' Union working with management or the Ontario government, whatever, once competition comes in? Who would like to fly?

**Mr Hunter:** I'll speak to it first, if you wish, because I'm an elected rep. From the early 1990s, late 1989 and early 1990, we embarked with Ontario Hydro on a number of joint initiatives to improve the workplace. There was a quality improvement and business improvement process. Since then, we've always offered to do those things. As employees, we've always tried to offer anything we can do to improve how the plants operate, both in safety and the mechanical side of the plants. I think we would do anything we can to try to make the plants run better. That's how we will win in a competitive market.

**Mr Galt:** So you're all set to work hard to make competition work, to be the best and to make sure you can produce electricity in a competitive way, and you're comfortable, with the plants here, A and B, that you can compete in that international market, considering the debt and everything and the cost of these plants?

2130

**Mr Hunter:** And given that the corporation is willing to continue to put money into the plants to keep them running, though.

**Mr Galt:** It all goes into the competition. Whether it's putting money in, that has to be reflected in the rates afterwards.

**Mr Hunter:** Certainly it does, but in order to keep the plants running you have to keep them fixed. That's some of the things we're paying for right now.

**Mrs Fisher:** I'm trying to frame how I might start this. We had the Macdonald committee presented to us a while back and the white paper seems to be forthcoming now, which I'm pleased to have before us, whatever it looks like in the end. Yesterday there seemed to be some type of forerunner to it, talking about continued public ownership of two parts of Ontario Hydro, if you will, but I think listening specifically to the generation staying intact.

I want to pre-empt it by saying that I remember working at Ontario Hydro when nuclear excellence was existent and I personally believe we can recover that situation today. I firmly believe that.

I want to start by saying that we had a presentation by the British people, British Energy, at our committee just mid-week last week. John Murphy attended after and we had some discussion. He attended at that time in his capacity as a director of the board of Ontario Hydro. I asked the question and I pre-empted it by keeping the public ownership scenario in mind. I pre-empted it by saying,



number one, had he seen the report? I will ask some easy questions here and then there's one at the end that I think makes the whole difference on the whole recovery plan here. Has everybody seen the British proposal?

**Mr McGuigan:** No, I haven't. I watched part of it, but I haven't read it.

**Mrs Fisher:** I think it's something that every Ontarian should see, because I personally believe there's a solution there that we can strike for and reach. The British proposal goes something like this: Over a period of time they decided to privatize all but nuclear, then looked at nuclear. I'm not talking privatization; I'm talking about a way to get to nuclear excellence again at Bruce and at Pickering. If in fact the proposal generated these types of results: reduced electricity costs — and I might suggest that in the beginning maybe the rate was propped by government to make it work, but given that and assuming that we have a \$15-billion phased debt right now, that may be what has to happen.

I don't know the answer here, but let's look at the results: increased safety performance, lower electricity rates, union workers who stayed in the same unions and moved over to whomever they moved over to, though that would not necessarily have to be the case. There was a reward system in terms of merit increment. There was a share offered to the workers. In general it resulted in the recovery of what was turning out to be no different from ours, a situation of running-down units to upgraded units.

My question is this: The IIPA thoroughly investigated poor management decision-making in the past. Living in this backyard, I think that has reflected negatively on the workers and their ability to bring their brain to work and let it work. I ask you this: Do you think that given those rewards in the end to the consumers of Ontario and to the workers, management and union can make that happen?

**Mr Hergott:** Barb, I'd like a shot at that because I'd really like to challenge this media attention and this spectacle being raised of the big, bad union.

**Mrs Fisher:** That's not what I'm suggesting.

**Mr Hergott:** All right, but I believe that is a barrier to them working together. There must be a little dissonance within this committee, as there is with the employees. Constantly being raised here as an excuse for the poor performance of Candu are labour relations and a collective agreement. That's one of the prime things. Our CNO, Andognini, is in Seoul, Korea, and he is talking about that, saying labour relations is one of the problems with Candu. It's robust technology. But there's a dissonance with the employees because they see a union offering to lay up a heavy water plant — volunteer labour — they see putting money into nitrogen blanketing, and there's something just not adding up. That doesn't seem like the big, bad union. I believe there have been letters made available to this committee that show that the offerings have been made but to no avail. They're not getting a response from Hydro.

**Mr McGuigan:** Can I make one comment on that?

**The Chair:** Of course.

**Mr McGuigan:** I do believe too that the British power system — I believe the question was asked quite a few

times here before they actually got an answer, which I'm not sure was clear enough, but British Energy made it very, very clear that an intricate part of making that happen was the cohesiveness between the management and the union. I work for Ontario Hydro and I have to go to work tomorrow. I dare say that at this point, as a worker at Ontario Hydro, I feel us going a little bit in the opposite direction at this time, which concerns me, because if we do get into the situation that you're talking about at this time, where we are told we can't communicate, when we get into the situation where we can't communicate, that is a situation where maybe you will start seeing big, bad unions because we're getting punched around. I believe the British power workers made that very clear and I think that point should be taken heartily at this time by this committee. That is an important part of that initiative.

**Mr Hunter:** There's one other example, Barb, that I think we can use. As you're aware, when the heavy water plant had to go to a single unit, it was a joint effort. We sat and went through all the facts and figures and whatever to try and keep us competitive in the world market. It was a joint effort and we managed to do that. With the closing of the heavy water plant, we were simply caught in the crossfire of all these IIPA recommendations. It was nothing to do with how the heavy water plant was being run. I think that's an example where we can work together well.

**Mr Morgan:** May I add a point on that?

**The Chair:** Absolutely.

**Mr Morgan:** You were asking about incentives. There's a huge incentive for the people in this community. There are about 1,700 people who are going to be asked to move out of the area, both management and PWU. People are going to take a bath on their houses. People are going to lose a lot of money on that. This community is going to have a potential for Elliot Lake-type effects. There's a huge incentive for union and management to get along here. All we need is the government to give us a green light, an open window and say: "There's something to go for. Go for it. You can keep Bruce A alive if you can come to some kind of arrangement." I think it's highly possible.

**The Chair:** A chance for one more question per caucus as we move around, please.

**Mr Kwinter:** As employees and insiders, I'd like to get your reaction to the sequence of events that led up to the August 12 board decision. First of all, Mr McGuigan has acknowledged that the problems that were identified in the IIPA were well known, and I think most of the workers agreed with him, and had been reported to the Atomic Energy Control Board for a number of years. There was an interim report given to the board on April 17. Mr Farlinger, when he appeared before us, stated that it was no big deal, they get reports all the time. But certainly the issue was known in the interim report, a lot of it. It wasn't fleshed out as it was in the final report, but that happened.

We then have the August 12 meeting where it was supposed to be an information item only. You get to the meeting and suddenly the recovery plan is presented for

the first time. It changes from an information item to a decision item. It's voted on and approved at that meeting. From your perspective, was there anything happening in the operation of the nuclear facilities that would precipitate that incredibly quick decision, and what changed from the report that they received on April 17, which outlined basically the problem? Mr Kupcis said that everybody knew the problem. All he wanted Andognini to do was to quantify it. He needed some experts to come in. It was, "How extensive is this so we can address it?" And suddenly they make this commitment to spend this \$8 billion, to lay up these reactors, all of it done, in my opinion, without any consultation with the people who are going to be impacted by it, without any options examined. You're the guys who are running these things. Do you have any insight from your perspective as to what would precipitate that?

**Mr Hunter:** I believe one of the things that forced it was that they wanted it almost like a surprise attack. The quicker they reacted to it, the less chance you would have to put up arguments to stop it. I believe if they had just gone forward and said, "I think this is what we might have to do and we'll let you know in a month or two," that would have given more time for some of the concerns you've heard over the last while to be raised. I think once the decision was made to do it they wanted to do it in a very fast manner.

2140

**Mr Laughren:** Someone invited questions on the heavy water plant; I can't remember who. I asked the question today at Bruce about the heavy water plant because I remember the Power Workers' Union came before the committee and indicated that they would help resolve the problem there, prevent it from freezing and so forth. We were told that the heavy water plant was a dodo bird, that it wasn't needed any more and never would be, and would be completely dismantled. As a matter of fact, you can see that some of it has happened already, I guess. It's quite an awe-inspiring sight. Think of all of that being dismantled. They will not need it. If they did need it, they wouldn't need it until the year 2015 or something like that, and even then there is new technology now, so that's history. Was that a surprise to you and can you shed any light on that?

**Mr Hunter:** I believe when they told you that, they were speaking about Ontario Hydro's own inventory. We basically produced the last of Ontario Hydro's inventory late in 1993-94. Since then we've tried to sell internationally with AECL. The technology we have — I agree there are new technologies out. The difference with ours is that it is bought and paid for. It produces at a competitive rate because we manage to sell it on the world market. As stated before, I think by Mr Van Bastelaar, the product we produce is world —

**Mr Laughren:** They said they couldn't produce enough to make the plant operate efficiently at all and that it simply — I can't remember the numbers now — made no sense whatsoever; they couldn't operate with the level that they could sell.

**Mr Hunter:** They can produce —

**Mr O'Toole:** Ten times what they need. That's the problem.

**Mr Hunter:** — right now, I think, on average about 350 megs a year, if that's what was there. We've also figured out ways to operate to produce less but to keep the cost down, and that's in fact what we were doing with the AECL contract. AECL offered us a contract to keep us open and the reason they did is for their own future Candu sales. I think it makes sense to have a domestic source of heavy water to try and sell reactors.

They have new technologies but I want to point out that all those new technologies come with a pricetag. I don't believe those new technologies would instantly be able to produce heavy water as cheaply as we can produce it. I think that's why it makes sense when you have a plant there that runs well — in the 25 years that the heavy water plant has operated, we have always met our production targets, we have operated safely and we have always been within budget. To be quite honest, I'm sure you've heard from other places in Ontario Hydro that that's quite a thing to say, for a department that has managed to do that all those years.

**Mr O'Toole:** We've sort of heard the whole thing on this Andognini thing, and I'm looking at your own particular site report here. There was kind of a turnaround in management. A kind of SWAT team comes in and just assembles all the data. What they told us was that all the data were already there, seven and eight years old. It was by the peer reviews and the AECB and all those people. What those reviews said was that the work wasn't getting done, for money or whatever reason. That's basically what it said. All the plans were still in the book.

That worries me. I go back to the cultural thing. How do you say, "Look, it's all over here," and start from a clean sheet? That's the whole issue. Are these true? It concerns me. I'm under the 4.0 and this is red, which means it is minimally acceptable. I didn't write this, but we are responsible to inquire into its authenticity. You said you commented on it. "Human performance errors are a major cause of operation events and a general lack of clear, definitive procedural compliance contributes to this problem." That's kind of cultural. That's an "aw" kind of attitude. I've worked for 34 years in major industry.

You need to really have a cultural awakening — huge. By the way, this is called a major significant event. That's how you get people to change. You create a major event so that you have turnaround behaviour. I don't blame union or management; it takes both. At the end of the day they are both still there in whatever environment. Is it possible to recover? One suggestion of how that could take place: You've got a whole parade of Americans coming in here with this real instant know-how stuff, a lot of cultural things. How are we going to get started here? We had a tour of the plant today.

**Mr McGuigan:** Can I answer that?

**Mr O'Toole:** Sure, anything.

**Mr McGuigan:** Then Harold will have something to say. As far as the IIPA report goes, during a period of time



— I may be going back to what Mr Kwinter was asking — back in April 1996, and it is in my written submission to you, a workshop was formed. It was control room people. That workshop was entitled Presentations on Safety, Culture, Professionalism, Teamwork, a presentation from INPO on the development of it, what it's there for, how they can support us. We took that very seriously. This was in April 1996. These were control room people, all stripes in the control room. We're talking about the fuel handlers, the authorized nuclear operators etc.

We began to develop standards. The first thing we did was set forth the guiding principles for nuclear control rooms for ourselves. I suggest you ask for those and read the education document that went with it that was written by control room personnel and supported by local managements and operations throughout OHN.

There were some six standards, and one of them was procedural compliance, by the way: logging, turnover, communication, a self-check policy, panel monitoring and the use of our supervised control panel operator, who is a person who would monitor the panel for an authorized person while he went to the washroom or had a quick break. These standards were ready to go. We were looking for someone to issue them. At that time, in the spring of 1997, we were convinced that we had them nailed down. The IIPA report says: "Several initiatives are under way to improve performance. However, some newly developed standards are not consistent with good industry practice and managers and supervisors will reinforce these new standards in the field." These standards were developed from INPO. The number one INPO-rated stations in the States is where we got our information to develop these standards.

In April 1997, all the teams were stopped. A directive came down that there would be no more teams unless approved. Our workshop teams submitted our terms of reference. We had also planned another workshop, knowing the value. We had a roller coaster going here. We had talked it up in the control room to the point where people were on board. They wanted to get involved. Our own local workshop team at Bruce A had 12 individuals on it. Some of them worked at home to create these standards.

This is the picture of the way things happened: The team stops. The standards go nowhere. Our hands our tied. I will say that recently, in the last week and a half, these very same standards are at the top of the limelight. In fact, next week I am going down to Toronto to talk about them with another individual; not as a team member. This has been a problem for us. Every time we come out of a peer, we evaluate the peer. We make together plans. Yes, as I stated in my thing, we didn't implement things as fast as we wanted to. There's a very fine line in the safety culture when you're trying to make a safety culture grow between taking speed of implementation, developing stress to the point where you eventually collapse the current safety culture you have.

If I can use the analogy of a used car, we are driving a used car. We have to go up a big hill. The distance from here to here is high. However, for a used car you don't

want to go up a steep hill. You need to go gradually. Also, however, if you slow that car down and it stalls and it hasn't been serviced and the bearings are bad, it comes to a halt pretty darn quickly, and frustration sets in. I would suggest to you that it's not the people, that we didn't have the initiative in that safety culture to grow on. Our hands were somewhat cuffed over the period of time of the IIPA. We couldn't do anything about them. Now we are doing something about them.

The reason for all those stalls? I don't know. Perhaps, as I've stated to you, the IIPA wanted a static picture of Ontario Hydro. Well, that static picture ended in June.

**Mr O'Toole:** Just one comment.

**The Chair:** No, Mr O'Toole, thank you.

**Mr O'Toole:** Thank you very much. You've been very tolerant.

**The Chair:** I have indeed, far beyond that. Let me move on. I had a request for a question of the deputants from our legal counsel.

**2150**

**Mr Power:** I just wanted to follow up on the suggestion that was made earlier that you would be open to public-private types of arrangements. Is that consistent for each of you at the table? Is that fair to say? Yes.

Just by way of background, the PWU, as you may know, made a proposal to the committee some time ago, which we are looking at, in terms of all the units. That proposal was forwarded to the chairman of Ontario Hydro and a request was asked of the chairman. We have the chairman's response back and it's been sent to Mr Murphy. The chairman basically said he is uncertain, given the human resources problems, whether Ontario Hydro could pull it off but he left the door open expressly to what you said — some sort of a public-private offer opportunity.

He indicated there are a couple of limitations, though, one of which was the history of the collective agreements and how they might fit into a new relationship. I guess what I throw out to you — I wouldn't imagine that you'd have a position on that yet, but if you're serious about this, in pursuing that particular option, we'd be quite open to hearing from you as to what you think the issues are as raised in that letter from Mr Farlinger, how it could work. If you're happy with the British Energy model, you might want to have a look at how they've dealt with these issues and see if it fits with the way you'd like to work. If it does, you might have a model there worth bringing back. I don't know if you have any comments more specifically, but it has been raised with us.

**Mr Morgan:** Isn't it kind of getting the cart before the horse? Instead of asking us if we're willing to amend our collective agreement, shouldn't we be given the opportunity that the possibility of a public-private partnership exists currently? We can't do that under the Power Corporation Act, as I understand it. It's not in the cards.

If the Minister of Energy, Norm Sterling, or possibly even the Chair of this committee, were to say, "Yes, it's a possibility, if the union and management at Ontario Hydro would sit down and explore it with interested investors,"

then who knows? The people at Bruce A are obviously motivated to keep Bruce A going.

**Mrs Fisher:** On a point of order, Mr Chair: I would suggest that it might be wise to review the terms of reference of the select committee here. In fact, those allow us to discuss these types of options without any requirement for any approval from anybody. It says look at all options, consider all options as it relates to the IIPA review, and then it goes on to the secondary side of it with regard to the safety requirements by AECB. I just wanted to raise that as —

**The Chair:** Thank you, Mrs Fisher. While not a point of order, it's worth being reminded of our terms of reference and I appreciate that. Mr Hunter, you were trying to get my attention, and then Mr McGuigan.

**Mr Hunter:** I believe right from the start John Murphy did write letters to Mr Farlinger to say that we were open to look at other things. I believe as a union we're willing to meet with anybody. As pointed out, we would have to know who we have to meet with first before we actually say what we can do and what we can't do. We're open to anything to keep the stations open and keep our people working here.

**Mr McGuigan:** It's along the same lines as what I wanted to comment on. In a situation like that and a question like that, as a PWU member, my answer to that would have to be that my PWU elected council will make decisions that I trust. That's why I have elected them.

A question like that, perhaps, I would say, in this forum, may put myself, as a member only, to answer and put forth suggestions to you that are possible in privatization, are possible in partnerships, are fine. But yes, the PWU members are willing to do virtually anything to discuss possibilities. I do know that. However, I would say that my elected council in PWU are the people who should be responding to that with more detail.

**Mr Power:** If I may, I understand exactly what you're saying and I presume they're going to respond back. The only reason why I throw it open to you is that the letter we just received from Ontario Hydro late last week was the first suggestion that this possibility was on the table. I didn't know whether you'd seen or heard of the letter, but given that you seem to be saying the same thing that we heard from Ontario Hydro — and just coincidentally, British Energy was at the table saying this is a model that might work — it's obviously caught some interest here. I just leave it with you to ponder about, I guess, and think if something can be done there.

**The Chair:** Thank you very kindly. I appreciate the generosity of your time. That will conclude the questioning this evening. I've imposed upon your time. We've gone well past the hour we were to adjourn. It's almost 2200 hours, or 10 o'clock, for Mr Conway.

**Mr Conway:** Trust me, in Bruce county it'll be 10 o'clock.

**The Chair:** Or maybe 9:55. I do appreciate your time to be with us and we appreciate your testimony. One point

I might ask: If there are other items that arise as a result of this evening, please feel free to get a written communication to us as quickly as possible. We'd be very happy to receive that. You were trying to get my attention, Mr McGuigan.

**Mr McGuigan:** Just perhaps before you do close, on behalf of the authorized nuclear operators I represent at Bruce A — in a non-PWU fashion; again, I'll steer you in that direction — thank you very much for our opportunity to speak to you. However, we have left you with written documentation. If there is anything that you need clarified at any time, we are more than willing to assist the select committee to clarify those or do whatever we can to try to clarify the culture. I would suggest it's a nuclear culture and not a nuclear cult that exists.

**The Chair:** Thank you. You've been very helpful and I personally appreciate the testimony that's been given by both groups this evening. We will be prepared to receive more deputations tomorrow morning. Again, we thank Mrs Fisher for her courtesies of hosting us here and Mrs Johns, whose riding is almost immediately on top of us. We thank them both for their generosity and we thank you all for this evening.

**Mrs Fisher:** Before we adjourn, if you don't mind, I don't know what it's called but I don't think it's a point of order —

**The Chair:** Make a point; I'll let you know what it is.

**Mrs Fisher:** A point: Prior to coming into this session here tonight, as you know, we could have had a whole pile more of people who had an interest in making submissions and I did warn the committee that there was a possibility that the invite was out to receive anything in written text, which I do have too, that I would like to present to the committee on behalf of these people. One is Charlie Hunter and the other is Brian Hallatt. I do want these presented and included in the deliveries.

**The Chair:** I'll be pleased to receive them and we'll table them with the committee.

**Mrs Fisher:** The other request that I have been asked to make of the committee, as a research piece back to Ontario Hydro, is to ask them to develop a schedule, a comparative table, that shows the AECB requirements per unit and per site — so Bruce A and Bruce B and Pickering A and Pickering B and Darlington — the AECB requirements in terms of the workforce in each of the categories as compared to those that are projected in the NAOP report, as compared against those that are there today.

**The Chair:** Legislative research heard that, along with our consultants, and I'm sure will respond to that. I would normally say we'd try to have it ready by 8 am. It may take a little longer than that, but we'll do it as quickly as we can, happy to table that. Is there any other business? If not, then this committee will stand adjourned until 0900 tomorrow.

*The committee adjourned at 2158.*



## CONTENTS

Wednesday 29 October 1997

Bruce township; Bruce county; town of Kincardine; town of Port Elgin .....	H-377
Mr Howard Ribey	
Mr Ted Mielke	
Mr Keith Campbell	
Mr Malcolm McIntosh	
Mr Charles Mann	
Ms Maureen Couture	
Mr John Van Bastelaar	
Mr Doug Court	
Ontario Hydro Employees.....	H-393
Mr Harold Hergott	
Mr Ken McGuigan	
Mr Tim Morgan	
Mr Jake Hunter	
Mr Frank Morris	
Mr Robert Diamond	

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First Session, 36<sup>th</sup> Parliament

**Assemblée législative  
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**Select committee on  
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**Comité spécial des affaires  
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## LEGISLATIVE ASSEMBLY OF ONTARIO

SELECT COMMITTEE ON  
ONTARIO HYDRO NUCLEAR AFFAIRS

Thursday 30 October 1997

## ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

COMITÉ SPÉCIAL DES AFFAIRES  
NUCLÉAIRES D'ONTARIO HYDRO

Jeudi 30 octobre 1997

*The committee met at 0902 in the Best Western Governor's Inn, Kincardine.*

**The Chair (Mr Derwyn Shea):** Good morning. Once again I bring the select committee to order for the public hearings. We are pleased to be in Kincardine, and yesterday the tour and the public deputations were very helpful for members of the committee. I particularly express our appreciation to all who made the effort to be here and also to those who have been sending in written deputations. They are being assembled and being digested by the committee. Again, Mrs Fisher, it's pleasant to be in your riding, and we appreciate the courtesies that you have extended to the committee.

There is one piece of business, just to advise members that I'll table with you a letter from the Power Workers' Union dated October 28 that you should have in your file. We will have receipt of that, and that will go into our correspondence and be considered by the committee in due course.

INTEGRATED ENERGY  
DEVELOPMENT CORP

## COMMERCIAL ALCOHOLS INC

## CANADIAN AGRA CORP

**The Chair:** Our first deputation this morning is a panel of industry. If the witnesses who are going to be making presentations would come forward now please and take their places at the witness table, we would appreciate that: Sam MacGregor, Doug MacKenzie and Doug Fletcher. We have approximately 55 minutes for the deputation. I need to be guided a little bit by the witnesses. We can either pause after each presentation or ask the three of you to make the presentation and then go to open questioning. Do you have any particular preference in that regard?

**Mr Sam MacGregor:** Mr Chairman, if it please the committee, we have about a six-minute, six-page statement that we would like to read into the record.

**The Chair:** That's done in concert; the three of you are sharing that?

**Mr MacGregor:** Yes.

**The Chair:** Why don't we do it that way? We'll do the one presentation. For the purposes of Hansard, would you be good enough to identify yourself and your colleagues and then we'll proceed.

**Mr MacGregor:** My name is Sam MacGregor. I am chairman of Integrated Energy Development Corp. With me are Doug Fletcher, long-time associate with Canadian Agra Corp, and Doug MacKenzie, president and chief executive officer of Commercial Alcohols Inc.

This is an overview of Ontario's nuclear facilities issue and beyond. It may be a little bit broader than your mandate because it's more site-specific, but we believe it to be very relevant.

Thank you for the opportunity to discuss the relevance of Ontario's nuclear recovery plan as it relates to Bruce nuclear generating station A and Bruce Energy Centre. As developers and proponents of the Bruce Energy Centre, we support the recovery of all of Ontario's nuclear facilities, providing the government of Ontario can ensure that the refurbishing and operational practices are carried out affordably and in accordance with normal business practices. Whether you advocate or denounce the nuclear option, there can be no denial that nuclear power does not exhaust gases which contribute to climate change, caused in part by carbon-dioxide-induced global warming.

First, it is important to note that the fissioning of uranium in Candu reactors generates heat energy which is used to boil water. I apologize if there is some redundancy here that you probably all understand, but it's the reason for the genesis of the Bruce Energy Centre. The primary steam produced through Ontario's uranium fuel boilers is used to rotate turbine generators which produce electricity. Steam exhausted through the turbines is then chilled or condensed with lake water and returned to the boilers, where the thermal cycle continues. Although the steam temperature and pressure generated in Candu reactors is lower than the steam conditions generated in fossil fuel boilers, the steam-generating principles are similar. In single-purpose electricity generating practices such as those carried out by Ontario Hydro, lakes, rivers and cooling towers are used to condense or chill exhaust steam. However, in cogeneration practices such as those carried out by industry and most independent power producers, the exhaust steam from turbine generators is used to energize process industry. As a result, secondary industry serves as a condenser, increasing the overall efficiency of the thermal cycle.

Secondly, it is important to note that the conventional demand for electricity varies greatly throughout the hours of each day. As well, large volumes of electricity cannot



be readily stored, and Candu reactors are not designed to modulate or follow the load.

Finally, it is important to note that the Bruce Nuclear Power Development, consisting of eight Candu reactor/boiler generator/condenser systems, had the collective capacity to generate up to 80 million pounds of steam per hour, which is equal to 320,000 barrels of oil per day. The full complement of BNPD steam was historically used to generate 6,000 megawatts of electricity, representing some 35% of Ontario's electricity consumption. Because cogeneration practices were not employed by Ontario Hydro in Ontario's Candu generating stations, the system was and is only 25% thermally efficient. By not practising cogeneration, BNPD rejected the thermal equivalent of up to 240,000 barrels of oil per day to Lake Huron in the form of low-grade heat when all units were operational.

It was on the enormous potential to harvest cogenerated steam, to use large volumes of electricity close to its source of generation and to develop unique uses for off-peak electricity which could withstand incremental interruptibility that the Bruce Energy Centre was officially founded some 13 years ago. Even though the Ontario Power Corporation Act was appropriately amended in 1981 by a previous Ontario government in order to address the enormous potential of the Bruce Energy Centre, Ontario Hydro stubbornly refused to cooperate with the private sector proponents and developers of the Bruce Energy Centre.

Having heard the evidence of several internationally renowned energy efficiency experts during Ontario Energy Board's HR 22, the August 31, 1994, report to the board, recommendation 10.7, concluded the following:

"The board recommends that as part of its reconsideration of its rate structure, cost allocation procedures and customer classification, Hydro should consider the issues raised by supporters of the Bruce Energy Centre."

In spite of the above, Ontario Hydro continued to disregard the Bruce Energy Centre proponents' investment of time, expertise and private capital, as well as their increasingly accurate arguments in favour of diversification, increased efficiency and entrepreneurial participation required to improve the operation of Ontario's technology-driven energy system. Over time, the Bruce Energy Centre industrial proponents and developers became disillusioned with Ontario Hydro's arrogance and began investigating the consequence of expanding their enterprise in other regions, provinces and countries.

#### 0910

As a result, Commercial Alcohols Inc, represented by Doug MacKenzie, has gone on to develop a world-scale fermentation alcohol plant in Chatham, Ontario. Its electricity and steam source for the Chatham operation is by way of in-house natural gas fuel cogeneration. Commercial Alcohols Inc's second world-scale ethanol plant is about to proceed in Quebec, where its energy source will be by way of Hydro-Québec and its associated natural gas company, Gaz Métropolitain.

Commercial Alcohols Inc's original pilot fermentation ethanol plant continues to operate at the Bruce Energy

Centre, where it is now required to pay rural electricity rates averaging between seven and eight cents per kilowatt-hour, including a demand charge.

The implementation of the IIPA introduces the uncertainty of a clean supply of steam at a reasonable cost to this facility beyond 1998. Since energy represents 60% of the basic operating cost of ethanol production, the energy cost at the Bruce Energy Centre places a serious strain on the ability of the Bruce Energy Centre to compete. Further, Commercial Alcohols Inc has been offered an electricity rate between 1.3 and 3.5 cents per kilowatt-hour in Quebec. Of course, the 1.3 is in the low-valley period in an interruptible mode.

Second, Canadian Agra Corp, represented by Doug Fletcher, became a major investor in the Bruce Energy Centre in 1989 and constructed the world's largest alfalfa dehydration plant in 1990. This plant was to be the cornerstone of a family of interlinked agricultural processing industries. A full description of these investments is provided in a document submitted to the Minister of Economic Development in March 1994. I believe Doug has left evidence of that report with the committee.

The second member of this family, a 200-million-litre-per-year fuel ethanol plant, was scheduled for construction in 1992, with the other plants following quickly thereafter. In March 1992, Ontario Hydro refused to supply a long-term steam contract for this plant, and in mid-1993 they applied rural electricity rates to all existing and future industries in the Bruce Energy Centre. This act rendered these investment plans uneconomical, and Canadian Agra Corp's further development of the Bruce Energy Centre was terminated.

As a result, Canadian Agra opened a new industrial park at Ste Agathe, Manitoba, and has purchased the necessary property for another industrial park in Fort Saskatchewan, Alberta. The 2,000-metric-tonne-per-day canola crushing plant originally planned for the Bruce Energy Centre is now nearing completion in Ste Agathe and enjoying a base electricity rate of 1.975 cents per kilowatt-hour, or approximately 2.5 cents per kilowatt-hour after demand charges are included. This leaves the alfalfa cubing plant originally designed as an integrated, multipurpose facility operating with a single product base. The 1993 application of rural electricity rates has now resulted in energy costs rising to 20% of this plant's variable costs. Under these circumstances, the long-term future of this plant and its contribution to the local economy is uncertain.

Integrated Energy Development Corp, represented by myself, initially developed a major greenhouse facility at the Bruce Energy Centre. This project, designed to serve as an end-of-the-line condenser for the Ontario-government-funded central steam distribution system between BNPD and the Bruce Energy Centre, was premised on the ability to access affordable electricity rates to enable the production of fresh winter produce growing under synthetic light. Now IEDC is required to pay rural electricity rates averaging between seven and eight cents per kilowatt-hour, including a demand charge. Like the

other BEC industries, IEDC's source of steam and its associated costs beyond 1998 at the Bruce Energy Centre are uncertain.

IEDC has also developed a patented synthetic methanol synthesis process which would use off-peak electricity to produce hydrogen and oxygen from water. This hydrogen and oxygen, together with a reduced volume of natural gas, when burned only with oxygen from water in a zero emission process, will utilize carbon dioxide as a feedstock. I think, with respect, that's a very relevant and important opportunity for technology to drive the fuels of the future, because we all recognize what global warming is about. The end process is the synthesis of methanol, which can be used to operate fuel cells as an industrial feedstock and to improve the combustion of gasoline.

In 1993, a 200-megawatt plant was designed to produce 500,000 metric tonnes of synthetic methanol using IEDC's technology. This plant was planned for development at the Bruce Energy Centre in cooperation with a large Japanese trading and manufacturing investment enterprise. Unfortunately, Ontario Hydro refused to officially offer interruptible electricity rates averaging 2.42 cents per kilowatt-hour, and the project failed to materialize. Currently, IEDC is preparing to develop a 260,000-metric-tonne-per-year plant in a North American jurisdiction other than Ontario.

Taking all of the foregoing into account, it would appear that Ontario Hydro's problems are not limited to its nuclear component and that the problems are more pervasive and widespread than the IIPA report indicates. Indeed, if Ontario Hydro's senior management had worked with the private sector proponents at the BEC, perhaps at least some of the cultural and fiscal problems associated with the maintenance and operation of Ontario's all-important electricity system could have been avoided.

The proponents of the Bruce Energy Centre presenting to this committee have one common objective, which is to profitably add value to raw feedstocks, which for the most part require large inputs of electricity and steam. The menu of their collective activities includes:

(1) The production of fermentation alcohol, normally known as ethanol, which produces carbon dioxide and distiller-spent grain as byproducts.

(2) The production and concentration of high-quality food products which can serve as a carrier medium for secondary supplements from other processes.

(3) The production of synthetic methanol, which can absorb carbon dioxide, provide a liquid carrier medium for hydrogen and produce byproduct steam for use by neighbouring processes.

Other industries located at the Bruce Energy Centre but not represented at the hearing include St Lawrence Technologies Inc, which provides contract research and development services as well as analytical consulting and technology licensing services; BI-AX International, which manufactures specialty polypropylene film to the international market; and Bruce Agra Foods Inc, which processes raw vegetables, fruits and juices into concentrates,

sauces and purees in accordance with customer specifications.

As a point of interest, the Bruce Energy Centre is North America's only energy-intensive industrial ecopark and is recognized as such by North American and offshore visitors seeking blueprints for sustainable development. Again, as an industrial ecopark, the Bruce Energy Centre concentrates on value adding to agricultural feedstock; synthetic fuels production, including ethanol, methanol and hydrogen; energy cascading, including passing on reduced-rate energy from higher processes to lower processes; and process synergy, including the utilization of byproducts between neighbouring industries.

The proponents of the Bruce Energy Centre presenting to the select committee on Ontario Hydro nuclear affairs respectfully submit that:

(1) The failure of Ontario Hydro's senior management to grasp the full potential of the Bruce Energy Centre as a vehicle for increasing the diversity and efficiency of its large central electricity generating stations is germane to and symptomatic of Ontario Hydro's fiscal, cultural and equipment problems of the day.

(2) Nuclear generation must remain a significant component in Ontario's energy mix or Ontario will face the consequence of future carbon taxes and increased degradation of its atmosphere.

(3) Nuclear's prolonged operation should be underpinned with industrial ecopark developments such as the Bruce Energy Centre.

(4) Bruce GSA should remain operational but with appropriate safeguards to provide continuity of skills in preparation for early rehabilitation.

(5) A new corporation should be formed to hold property title to Bruce GSA, and institutional debt and private equity should be sought immediately to finance the necessary rehabilitation, staffing up and training programs.

(6) A new board of directors should be formed to represent the new mix of equity holders, introduce conventional acumen with appropriate accountability and assume responsibility for the rehabilitation, recommissioning and long-term operation of Bruce GSA.

(7) A large high-pressure natural gas line should be developed and dedicated to the BNPD and the BEC immediately to ensure that the burner tip price for natural gas to both BNPD and the Bruce Energy Centre industries will be competitive with other jurisdictions.

That completes our submission collectively. We are available to answer any question the committee may wish to ask.

#### 0920

**The Chair:** Mr MacGregor, thank you very much for your presentation. Just before I go to questioning, may I ask you to turn to page 4 of your presentation. The price that you quoted in your third paragraph for electricity rate offered in Quebec running 1.3 to 3.5: Can you indicate if that's guaranteed and what period of time that rate —

**Mr Doug MacKenzie:** The 3.5 is a long-term rate for about five years.



**The Chair:** Thank you. We'll begin the questioning this morning with the opposition caucus.

**Mr Monte Kwinter (Wilson Heights):** Mr MacGregor, I visited the Bruce nuclear energy centre a couple of times and I am very impressed with what you are doing, but I want to question a couple of your assumptions. At the very opening of your statement you talk about "providing the government of Ontario can ensure that the refurbishing and operational practices are carried out affordably and in accordance with normal business practices." What is your definition of that?

**Mr MacGregor:** Competition and appropriate training, good scrutiny. I believe that a board of directors responsible to its shareholder constituents is the way it should be done. Then, because nuclear is nuclear, it's a technology-driven supply of heat energy, and that means it should follow a business acumen with proper discipline and proper regulation.

**Mr Kwinter:** I'm sure you know that when the Macdonald report came out, it called for a level playing field, which meant that Ontario Hydro should pay taxes and that the government should not guarantee their debt so that they would have the same constraints on them that the private sector has. That, just by its very nature, goes against or could complicate the whole idea of affordability. Do you have any comments on that?

**Mr MacGregor:** I think not. I think that taxes are only forthcoming if there's profit, and that profit can only be generated through a high level of management discipline and accountability at all levels. I believe in private sector participation in a joint venture, and I believe the Power Workers' Union recognizes that this would be a good way to rehabilitate that. It would be much better than laying it up. So I have no problem in seeing all parts. In fact, I made a submission to the Macdonald committee and recommended that Ontario Hydro become a vertically integrated company offering shares in its component parts, with proper debt allocation to each of the subparts or subcorporate parts of the corporation. I think, Mr Kwinter, that there's no problem with having to pay taxes because that's the way the economy works.

**Mr Kwinter:** The Bruce Energy Centre is really a byproduct of the Bruce nuclear facility. In other words, the nuclear facility wasn't in there to be able to supply the Bruce Energy Centre. The Bruce Energy Centre came because the facility was there and there was, supposedly, availability of cheap steam that could run all of these particular industries. Is that true?

**Mr MacGregor:** Yes.

**Mr Kwinter:** I'm not trying to read a conspiracy theory, but have you ever given any thought to the reason why Ontario Hydro Nuclear was not prepared to do the various things you wanted them to do and guarantee these things being because they had for some time thought that this facility may not be available to you and that as a result they were going to have to be put in a position where they would have to supply energy to you from a source other than their own facility? Has that been something that you've explored at all?

**Mr MacGregor:** I think not, Mr Kwinter. I think the reason the Bruce Energy Centre never became a more significant byproduct of nuclear power is because Ontario Hydro continued to suffer its not-invented-here problems. The Bruce Energy Centre could have been, should have been, a good opportunity to optimize that facility.

**Mr Sean G. Conway (Renfrew North):** Sam, it's great to see you again, but the pages in your hymn book must be getting a little worn.

**Mr MacGregor:** They are.

**Mr Conway:** I've known you for probably 18 or 19 years. You have come before several governments and made several very compelling statements around particularly an appropriate electricity rate structure to make the BEC viable. What's wrong, from your point of view, with senior management at Hydro? They don't seem to have been very cooperative over the last 15 years.

**Mr MacGregor:** That's an understatement.

**Mr Conway:** Why, though? What seems to be, from your perspective, the blockage in making what's now seeming to take root in Quebec and Manitoba take root here in the Bruce Peninsula?

**Mr MacGregor:** Donald Macdonald asked me that very question at our Macdonald committee submission, Mr Conway, and my response to him was, "Inertia." That is a very big flywheel, and if you try to change its direction, you'll find the pilot house is locked tight. It listens to nobody because its pilot house is inside a silo.

I'm sure if you talked to the people who work at Bruce GSA, Bruce GSB or the heavy water plant, trying to permeate their good ideas from the floor up, they'll have the same difficulty because the planning and decision-making policies that are inherent in Ontario Hydro's historic momentum are just impenetrable, even for somebody who has written as many hymns as I have.

**Mr MacKenzie:** Mr Conway, could I answer that comment itself? I'm the new kid on the block in a sense and I really have never, prior to 1992, had much experience with Ontario Hydro, although I've dealt in other jurisdictions across the country.

I can tell you that from my perception — and by the way, we have just gone ahead and developed a world-scale alcohol plant in Chatham. To give you an idea of the complexity of that, we have completed 44 major agreements, including three government policies signed, sealed and delivered, with the one single exception. There are four contracts with Ontario Hydro we've been trying to get signed for at least a year. There's a basic incompetence there and I believe it's — I wouldn't quite say "unethical," but it's incompetent, poor management.

Mr Kwinter, going back to your question earlier, there seems to be no accountability with respect to profit or efficiency or whatever, and therefore a profit-generating process in place would force more of that discipline.

To give you an example, and I'm going to run a little bit, we actually ended up trying to negotiate with Ontario Hydro not to put in a cogen facility in Chatham — a small facility, shouldn't be there, relatively inefficient, yet we can do it significantly cheaper than Ontario Hydro. We're

prepared to come to the table. Our capital costs were about \$8 million versus \$15 million. Ontario Hydro said it would cost us \$15 million and it cost us \$8 million. We had it guaranteed and they wouldn't believe it. So we built it for \$8 million, as opposed to Ontario Hydro's \$15 million. On top of all that, it's taken them nine months to design and not even implement yet a connect equipment for us for backup power and we've built the whole plant in 13 months, a \$150-million plant.

So there's no accountability, there's no efficiency drive, there's no decision-making in the organization. It's into floats for everywhere. Nobody takes accountability and nothing gets done.

To operate an industry here — it's so different in the rest of the world. I'm even dealing in the Ukraine, and it's much more fun to deal with them than Ontario Hydro.

**Mr Conway:** Now, that's an answer.

**The Chair:** I assume you won't be running against him either. Carry on. Mr Kwinter, you have time for one more question.

**Mr Kwinter:** The Bruce Energy Centre has a contract for 25 years of supply, but not at a fixed rate. That rate is negotiable. I don't know how often, but it gets negotiated —

**Mr MacKenzie:** Annually.

**Mr Kwinter:** Annually. You've just told us that with cogeneration, you can produce energy cheaper at Chatham than you can get it from here.

**Mr MacKenzie:** Yes.

**Mr Kwinter:** I've certainly heard that one of the options Hydro has is that they can't deliver the energy to you at a price that would be competitive for you, and that may be one of their options, to do exactly the same thing to fulfil their contract. Has that been discussed with you?

**0930**

**Mr MacKenzie:** I have no confidence they can build anything efficiently. I think we could build a large cogen here, more efficient, from natural gas, say, than they could ever fathom in terms of the process they go through. I believe they don't have the ability to deal with engineering firms in a competitive and effective way like private industry has, and really work with them to get costs — and, by the way, get efficient and safe equipment put in place. I don't think they can do it with the culture that's there, not just the nuclear division but everywhere.

We have just completed some work with Fluor Daniel, one of the best engineering firms in the world, to put in a large cogen facility here with natural gas at the site, which could produce steam for about \$3,000 to \$3,500 per thousand pounds, and reasonably competitive electricity rates — a lot less than Ontario Hydro is charging us today. We know we could do that and provide electricity at a fairly cheap rate to Ontario Hydro, versus the coal-fired boiler systems they're going to run to generate additional electricity in the province of Ontario, which I suspect is going to be much more environmentally negative to the province.

**Mr Floyd Laughren (Nickel Belt):** Gentlemen, that was a very comprehensive brief. There's more in it than I

can really comprehend, quite frankly, some of the technical information.

We were talking to Hydro people yesterday about Bruce Energy Centre. The impression I got — and my colleagues will correct me if I'm wrong here, I'm sure; they never hesitate to do that — was that it was a nice centre, but Hydro couldn't possibly subsidize you to the level that you want to be subsidized to with the rates of steam to you, and that especially, when Bruce A is laid up, as they say, for three years, it's not possible to provide you with energy at the cost that you want. In their contract, all it says is that they must provide you with energy; it doesn't say at what price.

I'm wondering to what extent the Bruce Energy Centre could function — and tell me if I'm wrong on this — without being subsidized by Ontario Hydro.

**Mr MacGregor:** I don't think the Bruce Energy Centre should be subsidized by Ontario Hydro, because at the end of the day, if it can't compete, it shouldn't be there.

The problem we have is that Ontario Hydro in its, if you will, wacky attitude — it believed that it was in the electricity business and that's all that mattered, but the thermal cycle of that plant is only 25%. If they would expand that steam partially through their system, they could exhaust that steam after it had generated some centrifugal motion for power generation but before it went to the lake, and exhaust that to the Bruce Energy Centre rather than taking primary steam at 600 psi and sending it to a so-called transformer, which is really a reboiler, and reducing it in quality to 180 psi, with no power generation across its reduction in quality.

All it needs to do is look at it the way an entrepreneur would look at it, and say: "Here's primary energy. Let's expand that across a turbine, make some electricity and let the industry be the condenser." I'm sure the Bruce Energy Centre customers would pay more than the lake pays for the heat energy.

**Mr Laughren:** I think most of us really like the concept of the Bruce Energy Centre. It's a wonderful concept in any number of ways.

**Mr MacGregor:** You're not alone.

**Mr Laughren:** That's right. I think we all really feel we'd like to see this thing happen and grow and become a prototype, if you will. What's bothering me is that there doesn't seem to be any logic to it not happening.

**Mr MacGregor:** There's no logic to Ontario Hydro's head office planning.

**Mr Laughren:** Okay, but is it fair just to chalk everything up to wackiness? I'm having trouble thinking it's all so clear to you that it's simply Hydro's mismanagement and it's got nothing to do with anything else. Forgive me, but you make it sound as though that's absolutely correct.

**Mr MacGregor:** That is absolutely correct.

**Mr Laughren:** What's to gain by that?

**Mr MacKenzie:** Actually, it is correct. That's essentially what it is. As you know, Mr Laughren — you were involved at the front end — we built the Chatham



plant. We tried to negotiate a long-term arrangement with Ontario Hydro for both electricity and steam — not necessarily fixed price or subsidized, but a long-term arrangement that we could count on. “We can’t do it. We’ll give you a rate for a year for electricity, maybe.” You can’t build a plant that’s going to operate 20 years on a one-year whim of Ontario Hydro, whose rates have just increased 30% or 40% in the first part of the decade. You can’t do it. They wouldn’t think long-term or take advantage of the capabilities that we do have here and develop the potential. That’s both environmental and cost-efficient to do.

**Mr Laughren:** When Bruce A is laid up, am I correct that Bruce B cannot supply the steam to you?

**Mr MacKenzie:** Yes. There is a major issue now. The industries have been located here because of the facility and the encouragement of this government and former governments, so the industries in most cases, if the steam rates are up at the levels that Ontario Hydro says they may be — yet to be defined — will all close. There has to be another solution. We do know we could build steam and electric generation capacity here if we were allowed to do it, and be competitive and survive.

**Mr Laughren:** That was going to be my next question. I don’t know how much time I’ve got.

**The Chair:** You still have a few minutes.

**Mr Laughren:** Good. What I’m not absolutely clear on yet is why Bruce B — forgive me for not knowing this — cannot supply steam.

**Mr MacGregor:** In the original planning notion of Ontario Hydro, a steam transformer plant was built adjacent to Bruce generating station A. In their plans there was a steam transformer plant — I don’t like using that word, because it’s not transforming anything, really; it’s just a chilling plant — adjacent to Bruce GSB. Bruce GSA had stretch steam — that is, the turbines were designed to accommodate less than 100% of the output of the boilers — so they took that stretch steam and used it to produce heavy water. Although the capacity to send steam from Bruce A to a secondary transformer plant is there, there is no stretch steam, so therefore it would curtail power, curtail the production of electricity.

Secondly, we never really wanted stretch steam; we wanted expansion steam, which is cogeneration. It’s large, central cogeneration, which industry would do if it had a demand for heat energy and a demand for steam and a demand for electricity. That’s why we say wacky, because they have an electricity monopoly and they don’t have to be thermally efficient because their rates, determined by the Ontario Energy Board, without teeth, can be pretty much where they want them to be.

We think it should be an energy company looking at what it has in its pantry first and how efficiently and with how much diversification we can put this public asset to work to encourage ecologically sound, energy-efficient, industrialized economies to expand. That’s basically what’s wrong. The system believes it to be an electricity system.

**Mr Laughren:** One final question: If at the end of the day you finally throw up your hands and say, “I can’t cope with this wackiness any more. Life’s too short” —

**Mr MacGregor:** And getting shorter.

**Mr Laughren:** Yes, I know — can the Bruce Energy Centre attract a cogen plant, if that’s the right word, to provide what’s necessary to keep the centre alive and growing?

0940

**Mr MacGregor:** It could have and it would have been much easier to address these problems of the day if Ontario had recognized the convergence of natural gas and electricity a long time ago rather than seeing them as competition. The natural gas availability as a feed stock to the Bruce Energy Centre should have been there years ago. Today it costs a lot of money to bring a natural gas line there because the bunker has kept it out.

**Mrs Barbara Fisher (Bruce):** Welcome to the hearing process. Nice to see you again. We have probably about 10 minutes here to cover 20 years’ worth of history and we’re going to have to be very succinct in how we get through this.

I want to reconfirm something. In fact the Power Corporation Act was changed to allow this type of introduction of ecopark participation at the Bruce Energy Centre. If that was the case, what’s the disagreement with the Power Corporation Act and Ontario Hydro allowing us to get a rate?

**Mr MacGregor:** Their interpretation was that electricity and steam were not analogous, although the Power Corporation Act was amended some 15 years ago, I believe, to move Ontario Hydro out of its electricity realm into an energy realm. That was the whole notion of the government of the day, Barb. When we went to negotiate for electricity rates that would relate to, if you will, well-head rates, because we wanted rates that were adjacent to the power source that did not carry with it the cost of transmission, they decided that the Power Corporation Act was not amended adequately. Our interpretation is that it was, but of course it’s legalistic. When they initially defended the fact that the Bruce Energy Centre was not unique for electricity rate consideration they stayed that, and they’ve maintained that position ever since.

**Mrs Fisher:** Yet that was the whole intent of changing it in the beginning. Instead of using the word “electricity,” it was “energy,” so it was a cogeneration issue.

**Mr MacGregor:** That’s right. It was unique to the Bruce Energy Centre too. That was explicit.

**Mrs Fisher:** On HR 22: There was a recommendation and it’s included in your brief, but to highlight that, we’ve been having difficulties understanding, in interviewing with the OEB, how many recommendations they make and how many are rejected when it gets to board, almost without discussion, it appears, by some of the records. It was in 1994, I guess, HR 22, that they decided that the board recommended as part of the consideration a rate structure, cost allocations and so on. Was the intent of that not to recommend fairness?

**Mr MacGregor:** I think the presentations that were made to that board impressed them that there was something unique here, that Ontario's energy resource was technology-driven in its power generation and that they should consider some of the unique opportunities for industrial ecopark development because that's what was advanced by the collective panel not different from today. In fact we have some internationally renowned expertise brought to that hearing to give evidence of the opportunities and the global trends. The board recognized that, made its recommendations, I believe supported by the Ministry of Energy and Environment of the day, and when it went to the Hydro board it was rejected, as I understand. I'm not privy to those meetings, but that's the way I understand it.

**Mrs Fisher:** I want to explore three areas of something that has to do with where we are today and is there even a possible future here any more in terms of the Bruce Energy Centre. There are in place today some signed, or there was at least one, and some gentlemen's handshake contracts with regard to the legal commitment of the provision of steam. Last night we heard that it was more of a moral obligation. I would interpret it to be more of a legal obligation when you're on contract with somebody. Am I not right, that Hydro has to provide something? Right. Is that a yes?

**Mr MacGregor:** That's a yes.

**Mrs Fisher:** We had an opportunity to meet with Pat McNeil, one of the senior VPs, last week and he's coming back on Tuesday for additional questioning. My question is this: There was an insinuation that he was working with the proponents of the Bruce Energy Centre, given the new status of not being able to contract steam from the Bruce in what even to your way of thinking probably would be a reasonable fashion. Would you agree that he's working with you?

**Mr MacGregor:** Are you addressing that to me, Barb?

**Mrs Fisher:** I'll address it to anybody.

**Mr MacGregor:** If that's "working with," that's a very, very broad assessment of what working with is all about.

**Mrs Fisher:** It represents 400 jobs today: 300 normally and then there are some seasonal ups and downs and everything else. I tried last night to make the point that as, we recognize there's a very significant impact as it relates to Hydro employees, but there's very much more at stake here as well. I understand the issue of 400 jobs and I understand what it's been able to do almost against all odds of cooperation somewhere else. If this committee were to make a recommendation to government through your report on your behalf, what should it say?

**Mr Doug Fletcher:** I think, if I may, one of the responsibilities Ontario Hydro has is to return to the partnership that was originally envisaged in the creation of the Bruce Energy Centre. In terms of the steam supply, they have a contractual commitment to supply steam. They have a contractual commitment to give us a price, a pricing 10 years in advance that is cost-based. We

recognized in the signing of that agreement that if they had to produce steam from the oil-fired standby boilers at some point in time, the cost of that steam would put the Bruce Energy Centre out of business and alternatives would have to be looked at.

They also have a contractual commitment in that same contract to provide on a best-efforts basis something better than a rural electrical rate, which has never been done. I'd come back to Mr Laughren's question about subsidization. Mr MacGregor said the Bruce Energy Centre should not be subsidized by Hydro, but neither should the Bruce Energy Centre subsidize Hydro or the rest of the taxpayers in Ontario. Why should an industrial park be charged a rural electrical rate? It's unheard of, and there's no other place in Ontario jurisdiction I'm aware of where this would be allowed to continue.

Ontario Hydro's position on that electrical rate has simply been, "You're in a rural area, you're not incorporated as a public utility, therefore the power act prohibits us from doing anything different." Yet we read in the paper every day where they've signed private contracts with private companies that give them electrical rates far better than a rural electrical rate, but they won't talk to us. I think after 27 months of trying to negotiate a new steam agreement when they had a responsibility to continue to supply in the first place, I had to conclude that Ontario Hydro executive management, not the nuclear division, was incapable of recognizing an opportunity. They were incapable of taking their vision beyond the glass walls of the Bay Street building.

They hid behind the power act when it suited their purposes to see the Bruce Energy Centre become less of an irritant to them. It was something that earlier generations of management had committed themselves to. The current generation of management didn't understand it, weren't willing to give it a chance and tried to throttle it at every turn.

This raises the question in my mind about, here we have an organization that has induced \$35 billion worth of debt on to the Ontario people and now this same management is asking for our support in delivering another \$12 billion or \$8 billion. I think the committee and all of us have to ask ourselves the question, should this happen? That's what is behind Mr MacGregor's recommendation that Bruce A should be refurbished, but under the guise of something other than the straight control of Ontario Hydro's management.

0950

**Mrs Fisher:** I want to ask one more question. We got the opportunity yesterday to at least drive by the Bruce Energy Centre. We have some additional documentation here which fully outlines the potential. I don't know if you want to answer this but I'll ask it anyway. Today we have seven facilities there, if I recall the right number. What would you guesstimate the total value of that to be? If we could ever get somebody to understand this and move forward, what do you think the potential growth could be?

**Mr Fletcher:** The Canadian Agra investment, not just in the Bruce Energy Centre but in the infrastructure that









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anybody else who might help us?  
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Mr Strong came to the site. He is  
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has supported this project forever,  
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ppreciate his commitment to the  
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r generating energy option, to get  
ids and the value-added products  
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or one very quick question from  
le to use it.

**Mr Conway:** I would like you to explore or to expand  
a bit on your proposal, Mr MacGregor, about some new  
approach to the ownership of the Bruce A site. It's  
something we were discussing with some of the Power  
Workers last night. It's been raised in other contexts in  
this committee. Could you just maybe elaborate a little bit  
on what you see there as a workable, manageable  
possibility?

**Mr MacGregor:** Mr Conway, I'm not a significant  
capitalist, so I really can't speak for the industry that  
perhaps could participate in that or the investment  
community that could perhaps participate in that.

I believe that Bruce generating station A is now an  
island and it's an island that, if it's going to become a  
stranded liability to the province of Ontario, should be  
made available to whoever is prepared to work coopera-  
tively with the expertise that's not only indigenous to that  
station but perhaps retired on the streets of Kincardine and  
Port Elgin and within the south Bruce impact community  
area.

I believe the Power Workers' Union — in fact, I've  
communicated with John Murphy myself. He believes that  
a mixed venture could come together. He and his  
organization and I believe perhaps even his treasury —  
I'm taking some licence there — would be prepared to  
participate in the evolution, if you will, or pulling it from  
the jaws of demise into a new renaissance. I think that  
would work and I think it would be good if it were  
community-sponsored, in cooperation with the people who  
don't want to leave the community, who believe in the  
Candu system and know how to run and operate and  
maintain a Candu system and know how to train future  
staff for underpinning that long-term operation.

**Mr Conway:** Any advice on how you would —

**The Chair:** Thank you, Mr Conway.

**Mr Laughren:** I have a very simple question. To what  
extent would rural rates make a difference? How  
significant is that?

**Mr MacGregor:** About 150%.

**Mr Fletcher:** In the canola plant it's the difference of  
\$6.50 per tonne of seed crushed, which on most days is  
more than the margin. So that, by itself, drove the canola  
plant to Manitoba.

**The Chair:** One last question.

**Mrs Helen Johns (Huron):** I'm looking at page 5 of  
your report, where you talk about the IIPA report really  
only looking at a very small group of the problems and  
that the problems are much more pervasive and wide-  
spread than the report indicates. Coupled with your  
recommendation number 1, that there seems to be a need  
for management to be able to understand and get a full  
grasp of the concepts of the Bruce Energy Centre, I'm  
wondering if you can — and maybe you can't because of  
the touchiness of this. You need to deal with these people  
in the future.

I've heard slightly over the last half-hour that you've  
talked about executive management being the problem. Is  
it executive management in the financial end, executive  
management in the generation end or is it executive

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management in the nuclear end? Can you pinpoint that more for this committee? We've heard a lot of people talking to us and everybody is passing the blame here. Can you focus in on where you think this lack of vision is at Hydro?

**Mr MacGregor:** Yes. I think it's a one-way mirror. I think the windows should be turned around at 700 University Avenue so they can look at themselves instead of looking at the rest of the world, because the problem is there, primarily on the 19th floor. I believe that Al Kupcis, at the end of the day, became very frustrated with the fact that he could not delegate down, that there would be no action carried forward.

Rates are critical and joint venturing is critical. Nobody today lives on an island.

I can tell you that any dealings we've had with the Bruce station itself have been excellent. We've had management there who cooperated and supported all the way through. We've had workers who cooperated all the way through. When we get to the 19th floor of Ontario Hydro, they have a capacity to just turn it around and not listen.

Rate-setting is very critical, so you can go through your own structure to determine who sets rates.

**The Chair:** Mr MacGregor, Mr MacKenzie and Mr Fletcher, I thank you very much for appearing before the select committee today. We appreciate your testimony. I hope if there's more information required by the committee, you will respond either in writing or personally. We appreciate your presence today.

**Mr MacGregor:** It's been our pleasure and we'd be prepared.

**The Chair:** Thank you. You are excused.

**Mrs Fisher:** Mr MacGregor, during his presentation, referred to a document that I think it would serve everybody in this room well to get our hands on. It was the IEDC response to the Macdonald committee proposal. As the white paper unfolds and as our responsibilities with the long-term venue of Ontario Hydro are discussed and recommended upon, I think it would be in everybody's best interests to take a look at this. I would ask if we could all get a copy.

**The Chair:** We'll ask them to supply it.

**Mrs Fisher:** Thank you very much.

**The Chair:** In that regard, I have to ask a question of procedure. Mr Conway was in some distress a little earlier in this meeting. Many of his documents were disappearing. May I ask you, have we been able to curtail Mr Laughren's drive for public ownership of your documents, Mr Conway?

**Mr Conway:** The mail is getting sorted out, thanks to Donna.

**The Chair:** We sent the clerk over to investigate and I have the full story there, and pictures were taken, Mr Laughren.

**Mr Laughren:** Private ownership was the problem.

**The Chair:** That wasn't even joint-venturing.

1000

## PORT ELGIN AND DISTRICT CHAMBER OF COMMERCE

**The Chair:** We'll go to the next round of deputations. We're into the 20-minute cycles, so we'll judge the questioning accordingly. The Port Elgin and District Chamber of Commerce, Kevin Carter and Mark Kraemer, if you'd be good enough to assume the witness table, we'd appreciate that. Welcome to the committee. For the purposes of Hansard, would you be good enough to identify yourselves and please proceed with your deputation.

**Mr Kevin Carter:** My name is Kevin Carter. I'm a Rotarian, a member of the chamber of commerce and I own the Home Hardware store in Port Elgin.

**Mr Mark Kraemer:** Chairman Shea, my name is Mark Kraemer. I am also a Rotarian. I am a director of the chamber of commerce in the town of Port Elgin. It is a pleasure indeed to welcome you and the members of the committee to Bruce county.

Our presentation this morning is going to keep primarily to the social and economic impacts that the current plan Hydro has adopted is going to have on our friends, our neighbours, our backyards, our communities and, not to be melodramatic, our lives.

I will give you a bit of background in that. I came to Port Elgin in 1983 as manager of the Toronto-Dominion Bank. In 1986 I had an option to leave this fair community and venture on to further and higher responsibilities in that organization which would have taken me to either Ottawa or North Bay. At that point in time, I made a lifestyle decision rather than an economic decision and I decided to call Port Elgin home.

You have to understand that leading up to that decision I lived in 13 municipalities in the fair province of Ontario and I have actually lived, worked, played and survived in many municipalities represented around this table today, from as far north as Sault Ste Marie to as far east as Port Hope and virtually every community up and down Highway 11, including the fair burg of Metropolitan Toronto.

When I tell you that you are sitting on one of the finest areas in Ontario, I do not overstate that. I can give you that without qualification because I have the experience and I have seen this province, and you people today are sitting in one of the finest areas of this province.

I have to take you back 30 years to give you some history of Ontario Hydro. In that time frame, in the mid-1960s it was determined that the Bruce area, for a lot of good reasons, was an ideal community to establish a nuclear power facility, which we refer to now as the BNPD. At that time the town of Port Elgin consisted of 1,900 people. The current population of Port Elgin today is 7,000 people. I can assure you that growth is entirely and 100% the result of BNPD becoming part of our community.

We welcomed this facility with open arms. In fact we encouraged them, because we all recognized that they were going to bring to this area a diversification in our



economy and a level and manner of stability and a degree of income that had never been achieved in this county before.

Up until that point in time, our economy was primarily geared to agriculture, furniture manufacturing, and tourism to a lesser degree. At that point, when Hydro made the decision to come to our communities, our entire focus changed from being a sleepy little community on the shore of Lake Huron to a major nuclear power-producing economy.

I came here last evening to listen to some of the questions that were being proffered from the committee. I think I will now open with a direct response to a question that was tabled very early in last evening's question period, which was, what is the effect going to be on our community? The only words I can think of that even come close to describing this are "utter devastation."

I'm reluctant to use terminology like that because it sounds sensational and it sounds melodramatic, but when you extrapolate the removal of 1,725 primary jobs from Ontario Hydro into our marketplace, recognizing that each primary job eliminates 0.78 secondary positions, the removal of 1,725 from Ontario Hydro removes over 3,100 jobs from our economy. That extrapolates into in excess of \$150 million of gross income gone from our community. In real terms, the impact of 1,725 people leaving the Bruce generating facility is equivalent to 40% of the labour force in that BNPD development today. I ask and challenge any of you to go back to your ridings and determine how your market survives when you lose 40% of your market and 40% of your disposable income. It is a physical impossibility.

To take this thing further, it is not just a matter of examining the lost income in our community; that's going to have phenomenal ripple effects down through our entire economies. The value of real estate is going to plummet in our marketplace, and is already being manoeuvred by Ontario Hydro corporate. The best example I can give you is that a transfer has occurred in the last month from the town of Port Elgin of an individual who built a beautiful house in our very best subdivision. Ontario Hydro bought that house from that individual for \$230,000 and it sits on the market today for \$170,000. That is a \$60,000 direct reduction in the value of every house on that street and will ripple right through our entire economy. In percentages, that's a 25% reduction right off the bat.

We are facing potentially 50% to 60% devaluation in our real estate values in this market area. What that does is, everyone who is affected by this thing, and that is everyone in this room facing you right now, ultimately is going to appeal their taxes. If they appeal their taxes and have the assessed value of that property reduced by 50%, I don't have to explain to you municipal politicians and former local politicians at this table what impact that has on the revenue to the municipalities in the Bruce impact area. You start spilling that down to the municipal level, and especially in light of the downloading that is going on right now and the amalgamation that's happening in Bruce county, and I want to know from Ontario Hydro how we

are supposed to survive. The impact is unbelievable when you filter this thing down through the total impact of it all.

We represent the chamber of commerce, and as we've said before, there are 165 businesses that I represent today from the Port Elgin and District Chamber of Commerce. Suffice it to say that we right now are fighting for our very lives.

In 1986, I made a conscious decision to leave a very stable career, one that I think would have carried me comfortably through to retirement. But I made a choice on lifestyle, and when I made that lifestyle choice, I also made a major commitment to the Bruce community by investing everything I own into four businesses. As a result, I have generated 35 jobs into this marketplace. While that's small potatoes compared to Ontario Hydro, I am not alone in that dedication and that investment and that commitment to the Bruce community.

Contrary to popular belief, we did not look at Ontario Hydro, when I made my decision to leave the TD Bank, and assess it as being a finite or a limited lifespan in terms of what it did and the economic impact it had on this community. This is not a mine that sits on the shores of Lake Huron. It was not created knowing that there was a finite supply of mineral in the ground that could be extracted from that ground and thus sold, knowing full well there was a given and definitive lifespan to that facility.

Ontario Hydro, through the Candu system, has created one of the very few renewable energy sources worldwide and it has created a system that is the envy of the world by the very virtue of the number of Candu systems that have been sold worldwide. For Ontario Hydro and for this committee to look at Ontario Hydro in the manner of a finite lifespan and that it's just bad luck for our community that the lifespan is over is not only misdirected but misgiven and an absolute fallacy. I cannot emphasize that to you enough.

#### 1010

The IIPA report that's currently being implemented by Mr Andognini and the management staff of Ontario Hydro is substantially flawed for a lot of the reasons that you heard last night and also because of the impact it has on the previous presenters to this committee this morning. But of critical importance to this thing is to examine the entrails of that report.

We were fortunate enough to meet with Mr Andognini last Friday in his office on the 19th floor. From that meeting we were advised explicitly that the decision to lay up Bruce A in a dry state was absolutely 100% dollars and cents and that economic impacts, social responsibility, and God forbid that we should use the words "moral or ethical responsibility" in the same sentence as Ontario Hydro, were not ever presented as a mandate in his contract with the board of directors of Ontario Hydro. It was absolute, bottom-line dollars and cents, "You tell us the best method," and no other factors could be considered but dollars.

We are told that he presented six options to the board of directors of Ontario Hydro, recommended one, which

was then accepted by the board and subsequently sent back to Mr Andognini for implementation, and that is where we are today.

What you have to understand is the main meat of that particular report has indicated that the cost of power production at Pickering A on an all-in basis, both rehabilitation and production cost, is currently projected at 2.5 cents per kilowatt. The same kilowatt of power out of Bruce A is projected at 3.5 cents and the fossil cost or alternative fuel cost generation is 4.5 cents per kilowatt. It is obvious that nuclear is the way to go and it's also obvious that Mr Andognini is very pro-nuclear, for which we are eternally grateful, considering where we live in this province.

The dilemma with his calculations is that there are multiple factors that are not considered in the 2.5-cent-per-kilowatt cost at the Pickering A generating station. First and foremost, the most critical function is that they've never performed a seismographic study on that site. The seismographic studies were completed at Bruce 15 to 20 years ago. It was absolutely determined to be one of the safest areas to construct nuclear on in terms of shifting of the earth's plates, and that seismographic study has to be done for Pickering A. That cost is not factored into the 2.5 cents.

The other problem have at Pickering A versus Bruce A is a horrendous problem with their electrical system because it is all wrapped in a PVC material. The entire station is contaminated with that particular type of wiring, and we are being told that entire system is going to have to be unwired and rewired, and by their own admission they have no idea what the cost of that project is going to be. Bruce A, conversely, has little or no PVC contamination in the entire station, and it is not a factor they've even considered because it's such a minuscule amount that is present in that particular station.

This community is absolutely pro-nuclear. They are pro-Ontario Hydro. We believe that we have been more than receptive in terms of our relationship with Ontario Hydro. This is a corporate citizen that we want and that we need. We are absolutely prepared to fight to our last breath to change the game plan that's currently out there in this report. We absolutely need Bruce A to survive and we need it retuned now.

We cannot go through a delayed period of five to seven years in the hopes that something possibly might happen, maybe, if the wind is blowing in the right direction in the year 2002. We need it done and we need it done now. In that respect, we would like to present you with some alternative plans. It's nice to speak rhetoric, but now I want you people to think about something and I want you to think very carefully about this.

The main problem with the current proposal of laying up Pickering A in a wet state on January 1 and Bruce A in a dry state on March 31, the first thing and the most obvious flaw in this thing is, what is the cost of the environmental impact of fossil versus nuclear? Everyone knows what the environmental impact is going to be of reverting back to a coal generating facility, but the real

problem with that thing is, why are we going back to a method of electrical generation that we moved away from intentionally and that Hydro's own projections and own reports have clearly indicated is incapable of producing enough power to offset the loss of the seven stations they're taking out of service by March 1998?

We are effectively throwing our hands in the air and saying: "We have the ability to generate this power. We're going to go back to a system that's more polluting, that's less efficient, less effective, more costly, can't do the job, but in the meantime we're going to solve all these problems by importing external power into our grid system to service the citizens of the province of Ontario." I'm sorry, but I do not understand that concept. When you go into a proposal where you're going to spend over \$2.1 billion to purchase external fuel, when you've got the ability to generate it safely right now, I don't understand those numbers. I don't pretend to be a genius, but you explain it to me, if you can.

We have a concept in place right now where we think we have a possibility that can work. The AECB chief regulator at Bruce A has indicated to us that unit 3 at Bruce A is capable of producing safe and efficient power for as long as seven years in its current state without spending one cent on it. He has also indicated that unit 4 at Bruce A is capable of a minimum five years, and possibly seven, with a very nominal investment.

I'm going to give them the benefit of the doubt and say that if these stations can keep running — right now, at maximum production, they produce \$500,000 per day in saleable electricity for the province. That's \$1 million per day, \$365 million per year or \$1.9 billion in five years. We are told definitively that the rehabilitation cost of each station at Bruce A is \$585 million; times four it comes in at slightly under \$2.4 billion. If we operate units 3 and 4, we are generating dollars that under the current plan are not scheduled to be generated by Hydro at all. In fact, the current plan calls for not only a dry lay-up but a decommissioning of Bruce A over the next five to seven years.

I take you back to the decommissioning of Douglas Point and I remind you that Douglas Point cost you \$100 million to decommission. What is Bruce A going to cost you to decommission? Again I will give you the benefit of the doubt and will use 1988 dollars, and let's presume for a moment that the decommissioning of Bruce A, which nobody has yet identified with a specific dollar value, is only four times Douglas Point. That is \$400 million.

In addition to that, there is a definitive cost to take Bruce A into a laid-up dry state that is ongoing and will exceed \$100 million. That is one half \$1 billion, and you add that to the generation capability of two units over five years of \$1.8 billion and what do you get: \$2.3 billion. Can you not spend \$100 million to rehabilitate four 800-megawatt reactors at Bruce A? I don't buy it. Now I'm being told, "I haven't got the manpower." We don't believe that either, sir.

If you analyse the potential of rehabilitating units 1 and 2 while you continue to operate units 3 and 4, even at 60%



of their current capacity, you then bring units 1 and 2 back on to the grid when 3 and 4 go down, and 3 and 4 become rehabilitated and the whole process comes back on stream — by Mr Andognini's own projections, it takes roughly 30 months to rehabilitate a nuclear reactor. We believe they're going to get better at it, and by their own admission, the PWU last night said they were too.

If you can generate those kinds of dollars and put four 800-megawatt reactors back on this grid for \$100 million, how can that be a bad investment? The other factors that aren't considered in here are the social and human tolls. The stress in our marketplace right now is absolutely phenomenal. I'm sorry to put you in that boat, but Ontario Hydro right now is playing with the very fibre of our society. If you doubt that, there are people in this room tonight who have started support groups that are being voluntarily staffed by psychiatrists, by women's shelter organizations, by all kinds of social support groups. They have banded together to form a committee and a forum where affected people in our community can go to those people for help.

Yesterday morning at 10 o'clock there was an announcement made that the new concept for Ontario Hydro is to create what they call quad packs. If you're not familiar with that, they now want to approach nuclear generation in this province on the concept of four-unit nuclear bundles packed together, called a quad pack, and by their own admission, and this is coming from the American onsite maintenance manager, the staffing requirement of a quad pack is 1,820 people. Bruce B currently employs 1,400 people. Ontario Hydro wants to eliminate 1,725 people from my community — my neighbours and my friends. If I can take 440 of those 1,725 and move them into Bruce B, and if I can run, if you'll pardon my new terminology, a twin-pack called units 3 and 4, that twin-pack will require employment numbers of approximately 1,150 to 1,200 people. We suddenly have 180 surplus positions at the BNPD. We have maintained the integrity of unit 3 because the licensed nuclear operators specific to those stations are still there and still running those stations. Whether you know it or not, a licensed nuclear operator at unit 3 of Bruce A is not a licensed nuclear operator at unit 6 of Bruce B or at unit 1 of Pickering A. They are licensed specific to the station in which they are employed.

1020

There is a way here, ladies and gentlemen, to save the Bruce, and that is not overstating the scenario. You are devastating our economy, you are destroying our families and you are absolutely taking the social fibre of our system and throwing it down the toilet. We don't believe it's necessary. We want Bruce A, we need Bruce A, and we need your voice long, loud and clear, being directed to the people at Ontario Hydro who can make the decisions to protect this area of Ontario.

In summary, this is my town and that's why I'm here today. When you go away today, please remember the faces of those who are sitting in front of you, because each and every one of them is going to be tremendously

impacted by the decisions and the recommendations you make to Ontario Hydro. We ask that you not abandon us. We have been supportive. We want this system and we can make it work. Don't underestimate the ingenuity of the people of Bruce county. That's about all I have to say. Any questions?

**The Chair:** Mr Kraemer, Mr Carter, I thank you very much for your presentation. While the time is exhausted, what I would like to do is ask you to table your plan in a written form for me and let me present that to the committee. Can you do that as quickly as possible —

**Mr Kraemer:** I can, sir.

**The Chair:** — and get it to the clerk of the committee with all dispatch? By that, I would really appreciate receiving it within a matter of several days, if you can do that.

**Mr Kraemer:** Can I add one footnote to that, Chairman Shea? I'm sorry to go over time here. The one thing I did not identify to this committee is there has been substantial discussion through questions and through presentations about the potential and the possibility of privatization of Ontario Hydro or a working partnership with the private sector. It is important that this committee understand that this is not a new concept and that there has been a written proposal submitted to Ontario Hydro Corp which was a three-way partnership between Babcock and Wilcox construction firm, Siemens corporation and AECL to form a triumvirate company that has absolutely put a proposal in front of them that would have funded the cost of retubing unit 2 at Bruce A, which is everybody's big problem.

This is not unique. There are other corporations out there that have come forward and volunteered cash to assist in the rehabilitation of Bruce A. The most significant one I can refer you to is, the actual manufacturer of the fuel bundles for the fuelling process has gone on record and stipulated that they would make a cash investment in the rehabilitation of Ontario nuclear. We thank you for your time.

**The Chair:** If you have copies of those proposals, make sure they're tabled with us as quickly as possible, as well as the proposal you've outlined today. I'd like to have that, if I could, by Monday. Either courier it down or fax it to start with, and that would be very helpful.

**Mr Kwinter:** Mr Chairman, on a point of information: Mr Kraemer, just for your information, to help you when you give your written presentation, this committee has already been told by experts in the field that the cost of decommissioning the reactor could be as high as \$700 million.

**Mr Kraemer:** Thank you for that information, sir.

**Mr Kwinter:** So when you're calculating, you may use that figure.

**Mr Kraemer:** That is a per-reactor cost, sir?

**Mr Kwinter:** Per reactor.

**Mr Kraemer:** We're talking \$2.8 billion then to decommission —

**The Chair:** I don't want to stifle things, but Mr Kwinter knows that wasn't a point of information.

**Mr Kwinter:** It was information to him, all right.

**The Chair:** You keep me chuckling here, Mr Kwinter. Thank you, but you know what I'm saying. Point well taken. Thank you very much.

**Mrs Fisher:** Just a point, because I don't know what. So the one report that Mr Kraemer refers to, the assessment done in 1996 with regard to the recycle analysis and the offer of private sector participation — it has been very difficult for anybody in the community to obtain that because it's considered to be an internal document. I don't think Mr Kraemer is going to be able to provide that. Some of the content is known, and that's what he's referring to. I would ask that we ask that of Ontario Hydro as opposed to Mr Kraemer, because he won't get it.

**Mr Kraemer:** In fact, its very existence would probably be denied if I were to pursue that.

**Mrs Fisher:** That's correct.

**The Chair:** Well, we'll pursue that as best we can. Let's assume that was a point of order and we'll just take it that way.

**Mrs Fisher:** I'm going to get it right on those points yet.

**The Chair:** I won't accept it as a point of order. I wanted to rule it out of order, but it's a point well taken.

I thank you very much. I look forward to receiving very promptly a copy of your proposals, please.

**Mr Kraemer:** You will have it, sir.

**The Chair:** Thank you very much. You're excused.

**Mr Carter:** Thanks for your time.

### O.C. LONG CONTRACTING

**The Chair:** May I call upon O.C. Long Contracting. That's Clayton Long and Lenore Long, please, if you'd come up to the witness table. Welcome to the select committee. If I may ask you, for the purposes of Hansard, to identify yourself and then we are in your hands. You have 20 minutes for your presentation and that would include questioning time.

**Mr Clayton Long:** Mr Chairman, I'm Clayton Long.

**Mrs Lenore Long:** I'm Lenore Long.

**Mr Long:** Mr Chairman, members of the committee, I'm a building contractor in this area and I'm a past president of the Grey-Bruce Home Builders' Association, currently a director of that association, a past member of the Port Elgin municipal council, and I belong to service clubs. I also worked in the very initial advisory committee to help the commission on planning to develop the energy centre here at the Bruce. I've been a resident of the area for 27 years. It was the Ontario Hydro project that brought me to the area initially, and the growth associated with BNPD has helped me in business for the past 25 years.

If station A does in fact close and approximately 1,700 employees are relocated to other sites in Ontario or become unemployed, it will have a devastating impact on this area. Those residents who remain behind who do not work for Hydro have nowhere else to transfer to or any compensation package, and in many cases no retirement

fund. We here in the Bruce impact area have suffered a recession for the past seven years. For the first time since 1990, things started to look a little more promising in this part of Ontario, and 1997 seemed to be the start of an economic recovery. The mood in the area was one of optimism and hope. Consumer confidence was restored, and then came the announcement from Ontario Hydro that left most of us in complete shock and disbelief. Can we withstand another several years of hardship?

The findings of this committee are critical to this area. If closure goes ahead as recommended, there will be more than a nuclear plant to overhaul. Many families will face serious financial hardships that will include moving to a metropolitan area where life is not so safe and homes and recreation are very expensive. Some families will have to separate, with the head of the household moving to another location and leaving the children and the remaining spouse here. Many homeowners will not be able to leave because their homes have suddenly been devalued below existing mortgages.

Our direct losses in the value of employee real estate calculated in the cost of all of this plan — and when I say "direct losses," those are losses pertaining only to Hydro in a move that would affect an employee. There are many Hydro employees who have guaranteed prices on their homes, and that refers only to the guaranteed prices. It is therefore reasonable to expect a rise in the incidence of divorce, suicide, stress-related disorders, and the general overall health of the population would decline. The human cost of this decision will take years to tally and by then the damage will have been done.

Some factions of the Pickering area have been so adamantly opposed to a nuclear power plant in their backyard that the municipality is holding a plebiscite on that subject. On the other hand, we here in the Bruce have generally welcomed nuclear plants. It is ironic that this proposed plan by Ontario Hydro will refit the most unwelcome of the plants first and mothball the very plants that have welcomed Hydro openly. Even more ironic is the fact that the economy of Pickering may well flourish if there were no nuclear plants there and the opposite is true of the BNPD. I would ask you to focus on the large buffer area purchased by Hydro and relatively small population in close proximity to the BNPD.

### 1030

If nuclear power has a future in Ontario, why can we not find a way to keep units 3 and 4 running while getting things sorted out? This would reduce the impact on our area and keep steam flowing to the energy part. Is it possible to keep units 3 and 4 running until units 1 and 2 are refitted? The ability of Bruce A to cogenerate is unique and should be given special consideration.

This committee must understand the economic devastation that this plant closure will create. Bruce A is also vital to the future of the energy centre both for the existing businesses and for any hope of future expansion. This proposed shutdown seems impossible to believe. Give this proposition the common sense test: If it doesn't sound right, then it probably isn't right. I have read some



information that has been tabled and watched some of the deputations presented to you and so far I have not seen any real consideration to keeping units 3 and 4 running at Bruce A.

In summary, my reasons for appearing here today are: that I hope you would consider Bruce A unique, and apart from Pickering A, different from all the other plants in the nuclear forum, because of its ability to cogenerate steam for industry — what a unique concept; give this area special consideration for its extreme dependence upon Hydro for its existence and give the children of this area maximum consideration when you make your recommendations; think of the consequences of moving the children from small-town Ontario to the fast track of the city; that you will seek the information and include the full financial costs of closing Bruce A; if our efforts fail to save Bruce A, that you will recognize our dependency and insist that we will receive a great deal of assistance to adjust. Thank you.

**The Chair:** Thank you. We appreciate that very much. There are about 10 to 12 minutes for questioning. Let me begin now with Mr Laughren.

**Mr Laughren:** Mr and Mrs Long, welcome to the committee. Your point about keeping units 3 and 4 running while the other units are refurbished or refitted, as you put it, is one that has been raised before by members of the committee and by the Power Workers' Union, who didn't think they should be laid up. The argument that comes back to us from Hydro folks is that it's not on, that they cannot do it for reasons that — and I'm not saying they're wrong, because I don't know either — they need to shut down all the units once in order to do it properly. I don't know whether you have any information or views on that that would be helpful to the committee.

**Mr Long:** I don't have any technical information that could add to my suggestion. I have discussed this possibility with people that are working in the plant and I assume that they would have some knowledge, but obviously they are not here to defend my suggestion. I don't have additional information, but there are those who think that it can be done.

**Mr Laughren:** I come from a community in northern Ontario that went through some extremely difficult times, massive layoffs and shutdowns. It just devastated the community. At the end of the day, it was the public sector that came in and bailed out the community of Sudbury. It wasn't the private sector.

You made reference towards the end of your remarks that if we're not successful in keeping Bruce A open — and who knows, quite frankly, I almost hate to say this, if it even will reopen after the three-year period? That's sort of lurking there as well, whether or not it will actually reopen. We don't know that. I'm not trying to cast a pall over the community but that's just something that's there in the background. I'm wondering if you have any suggestions. By this, I'm not suggesting that you're giving up on the cause, because I think you should be fighting for what you are, but what would be a natural investment in

this community that the public sector could engage in, if the unthinkable happens?

**Mr Long:** I think there are many ways in which it could be done. One is the public institutions that are moved around and planted in communities. Something like that could be an assistance, whether it be government offices like the Ministry of Natural Resources or some of those things.

We all know that demographics say there's a large retirement population coming in the future. We are not well served in that area right at this moment. We could use a lot of help in trying to transplant or market this area for that kind of growth.

There may be some industrial development that could be created with job incentives. All of those things have happened in many different ways in years gone by. I think of a combination of many different ways of helping the area adapt.

**Mr Doug Galt (Northumberland):** Good morning, Mr and Mrs Long. Thanks for the presentation. It was quite interesting. I appreciate your comment about the irony of Pickering wanting to get rid of it, so to speak, and you people wanting to keep it, when in fact that's the reverse of the recommendations. Whenever we have a large industry come into a community and we have them leave, it's a pretty rough experience on both ends. I've watched closely the Lennox generating station be built in the Napanee area and then be mothballed, and neither was good for various segments of society at the time.

What I'm coming around to and what's tough to measure here and to go away with a quantifiable feeling about — we've heard the emotional side, and I can understand that and follow it very, very well — is the social and economic responsibility of a public corporation. How much is that? If it was a private company, they close and are gone and you have no quibble with them. A public corporation is different — and I say "no quibble." Sure, you can go and argue with them, but how different is it, in your opinion, and what responsibility do they have and to what level? Can you quantify that at all, to be helpful for the committee and myself?

**Mr Long:** It's hard for me to quantify that. When I worked on development and on the advisory committee, when we were trying to bring growth to this area at another low time — we've had other lows before this — we had done as a committee some research and at that time that was one of the mitigating factors that we thought would give us an edge in our negotiations with Hydro, in that there were examples in the past for some corporate responsibility for this kind of thing. The Tennessee Valley Authority, at that time, was the one we reached for. They had, through some challenge, been forced to compensate an affected community quite largely to help mitigate the losses in the community.

I don't think I can refer to anything we've done in the province of Ontario. I don't have that material any more. It's quite old now anyway. We're talking about the period of 1978-80 when I was working on this committee, so I don't have any direct ideas as to how much compensation

there should be or in what form it should come, if it should all come from Hydro or if the province itself has some responsibility in this. I can't say.

**Mr Galt:** Mrs Long, on the social side, you haven't spoken yet. I'm curious. You are just sitting there full of information, I'm sure. Do you have any feelings or any thoughts you can express to us?

**Mrs Long:** I feel badly for the community because of the yo-yo effect on the market and people's lives. In our own family we've seen what moving from a small centre to a metropolitan area has done to the family; not ourselves, but in our close family. I think that we keep shuffling people back and forth and the price of property goes up and down. There doesn't seem to be any semblance to our life, and now this is just the worst possible news in the last 30 years. I really feel that the human suffering will be unbelievable.

1040

**Mr Kwinter:** Mr Long, we heard from Mr Kraemer and from yourself. I have to tell you that sitting here and listening to the rationale for keeping 3 and 4 open while they rehabilitate 1 and 2 makes eminent sense to me, when I listen to it. But then I look at the report of Mr Andognini, and I just want to quote a couple of the reasons why he feels this can't be done. I don't know whether or not you have any comments on it but I just want to put it out to you.

He talks about the magnitude of this particular rehabilitation. He says: "Undertaking a recovery effort of this magnitude in keeping units running reliably adds significantly to the complexity of the task. No nuclear electric utility has accomplished a turnaround in this time frame involving more than two units and most efforts involve substantial non-generating periods."

Then he goes on to say, in the preparation of their report and subsequent to the report, "...the extremely degraded condition of the boilers at all Bruce A units that has resulted in the shutdown of those three units with a concern over their ability to be returned to service." In a letter the chairman of Ontario Hydro had published in the *Globe and Mail* yesterday, he alluded to the fact that these reactors may never come back.

We, as a committee, are parliamentarians. We're not nuclear experts. We have to listen to the various concerns. I can tell you, from a human point of view, there isn't anybody here who will disagree with you. As politicians, obviously that's the route we'd want to go. Reactors don't vote for anybody. There's no question about that.

The question is, somewhere along the line there's got to be some ability to come up with a decision that deals with the human factor but also has to make some kind of sense so that this isn't just prolonging a problem that's going to have to be addressed again. Do you have any reaction to that?

**Mr Long:** I would hope that our efforts to try to keep those units 3 and 4 going are a worthy effort. I can understand Andognini's comfort in shutting all four stations down. I understand that it frees up a lot of needed help to concentrate on the 12 remaining reactors in that

proposal, but at the same time there is the loss of income by shutting them down.

I am acquainted with people who should know something about those units, they spend their whole lives around them, who claim that they should be able to run with limited repairs for another — take a pick, four, five, six, seven years. I hear different numbers, but the lowest number I hear is four years, with limited maintenance.

I think Andognini's goal here is to be able to use that help somewhere else. Our goal here of course is to keep the employees in the area, and hopefully we can recruit some talent, both from the past and from other places to fulfil the labour needs. But anybody who is close to that plant, almost all agree, as far as I know, that it can run for at least four years with a limited investment, and I hear this morning as long as seven years. I don't know how accurate those numbers are. I have no ability to determine that.

**The Chair:** Thank you very much, Mr Long. We appreciate your deputation and your presence at the witness table. If the committee has further information it would request from you, I hope you would be able to respond in writing.

**Mr Long:** Will do, thank you.

**The Chair:** We appreciate your presence. Thank you very much. You're excused.

#### SOUTH BRUCE IMPACT ADVISORY COMMITTEE

**The Chair:** The next witness, representing the South Bruce Impact Advisory Committee, Harry Thede. Good morning, and welcome to the select committee. Would you be good enough, for the purposes of Hansard, to identify yourself and your colleague.

**Mr Harry Thede:** I am Harry Thede, the reeve of Saugeen township, one of the impact municipalities of the south Bruce lakeshore. I have been chairman of the South Bruce Impact Advisory Committee since 1986, when it was first formed. I will let my colleague introduce himself.

**Mr Murray Thompson:** I am Murray Thompson, reeve of Huron township, another member of the impact group.

**Mr Thede:** On behalf of the IAC, we thank you for the opportunity to appear before your board here on the Ontario Hydro select committee.

On behalf of the south Bruce lakeshore municipalities I would like to welcome you to Bruce county and express our appreciation for your taking the time to consult with those who will be most directly and negatively impacted if the proposed Ontario Hydro nuclear recovery plan is implemented.

The South Bruce Impact Advisory Committee, referred to as the IAC, encompasses elected officials from the nine municipalities that have been host to the BNPD site since its inception in the late 1960s. The IAC also includes representation from the county of Bruce and the Bruce Community Development Corp, with participation from senior BNPD site management.



The IAC was established in 1985 in response to the reduction of the 3,500 Ontario Hydro construction workers. Since that time, regular bimonthly meetings have been held to pro-actively address Ontario Hydro issues affecting the community. This has included economic development strategies, particularly as they relate to opportunities at the Bruce Energy Centre.

As the cornerstone to the area's economic diversification program, a competitive energy rate for the BEC has been a community goal for over 10 years. It has been most frustrating that Ontario Hydro has circumvented these negotiations on several occasions. It is our intent to proceed with continuing efforts to secure a competitive electricity rate, as the need is now that much more immediate.

Support for nuclear generation and innovation: The south Bruce lakeshore is a knowledgeable and supportive nuclear community, placing the safety of workers, the public and the environment as the primary consideration in all decisions. Economic considerations have always been secondary factors. This priority has consistently been stated in many submissions, public hearings and reviews over the past years. As a community we want to reiterate this position today. Further, we want to impress upon the select committee the degree of community confidence in nuclear generation and future opportunities.

The community of communities impacted by Ontario Hydro continues to support the inclusion of Candu reactors in the energy mix of Ontario. Indeed, the Bruce community has been an active proponent of the expansion of the nuclear component to include the MOX program. The BNPD impact community further supports the application of BNPD to initially provide the large volume of electricity required to energize the world's first international fusion test reactor, known as ITER, better known as the International thermonuclear experimental reactor.

Also, the BNPD Impact Community recognizes both the need and opportunity to expand the horizons of natural uranium and the integration of other fuels in Candu reactors through the development of North America's first industrial ecopark, known as the Bruce Energy Centre, referred to as the BEC.

Finally, as the BNPD host community, we recognize that the BNPD, in partnership with the BEC, can and should become a world-class centre of excellence for demonstrating sustainable development.

The BNPD impact community has been subjected to Ontario Hydro's actions and inactions for close to 40 years, the AECL Douglas Point development. Therefore, we are well aware of the symptoms that now haunt Ontario Hydro Nuclear, such as its regressive electricity rate-negotiating practices.

#### 1050

The NAOP implications for the impact community of Bruce: The Ontario Hydro IIPA report identifies the need for Ontario Hydro's nuclear culture to be reversed if it is to be a safe, viable and valued Ontario resource for the future. This report also states that all existing operating units are safe. The Atomic Energy Control Board, better

known as the AECB, has confirmed that although nuclear safety performance has been encroaching on unacceptable levels, they remain within acceptable AECB standards. The Bruce community is confident that nuclear excellence can be restored, and we are anxious to be the host community to return nuclear excellence to Ontario.

Also released was the approved Ontario Hydro board of directors nuclear asset optimization plan, known as the NAOP. This recovery plan calls for the lay-up of Bruce A and Pickering A. The plan provides for the refurbishing of Pickering A starting in 1999, with the possibility of Bruce A being recovered after this date if the business case can be made to support the investment.

If implemented, this plan will have a profound, extensive and prolonged negative impact on the social and economic health of this community. The IAC is not aware of any socioeconomic impact analysis that was factored into Ontario Hydro's corporate survival plan. Ontario Hydro did not consult the community prior to the August 13, 1997, recovery plan announcement. The conscious decision by Ontario Hydro to exclude a community economic impact assessment leads the IAC to believe that the recovery plan has not considered all factors. It is not acceptable that the Ontario Hydro board and senior management have ignored the magnitude of this impact on the Bruce Lakeshore communities.

Community position: The NAOP is based on assumptions that demand further investigation, with a view to looking creatively at all options and alternatives. From a community perspective, there may be alternatives which would accomplish the goal of Ontario Hydro's recovery plan to return its nuclear operations to world-class status in a competitive environment while minimizing the negative impact to workers, families and communities.

The IAC is seeking intervention to Ontario Hydro's course of action to allow independent review of all possible options including:

Retention of Bruce A operations: Continue operating safe units while undertaking refurbishing activities and/or commit to advancing the refurbishing of Bruce A ahead of Pickering A.

Staff recruitment and training: Enact an Ontario-first, Canadian-second hiring policy. Offer recall incentives to qualified past — 1993 package — Ontario Hydro nuclear staff; provide displaced OHN workers, eg, heavy water plant, with assessment and training for integration into skill-demand fields; and supplement human resource needs with outside recruitment only if necessary. The BNPD nuclear training centre should become the main training location for all of Ontario Hydro.

Wet versus dry lay-up: Reconsideration should be given to the proposed long-term dry lay-up of the Bruce A units, as this has never been tested in the Candu system.

Private sector equity participation: This investment option should be considered to expedite the recovery process both in terms of time and cost factors. To the best of our knowledge, private sector investment has not been considered by Ontario Hydro, although some past interest has been expressed and should be explored.

AECB review: As the regulatory body for nuclear safety, the AECB should be formally requested to opine on any and all OHN recovery strategy. This would provide public and industry comfort that recovery actions are consistent with current and changing nuclear safety standards and requirements.

In summary, the Bruce community shares Ontario's direct and vested interest in the return of nuclear excellence. A safe, reliable, productive and cost-competitive electricity source is as important to Ontario's economic prosperity as the BNPD site is to the community health of the Bruce Lakeshore area. It is therefore formally requested that intervention be made to ensure that the impact on the community is a considered factor in the business case guiding Ontario Hydro's decisions. Further, it is requested that an investigation of alternative options and creative strategies be conducted prior to implementing any recovery plan.

I'd like to thank you for your attention to our concerns. We will be pleased to comment on any questions you may have.

**The Chair:** Thank you very much, Mr Thede. We have time for one very brief question from each caucus. I'll begin with the government caucus.

**Mrs Fisher:** Good morning, Harry and Murray. This will be brief. I know for a fact that you have been involved, Harry, for how long in the community, taking its plate to Toronto, Queen's Park, Ontario Hydro, wherever we could go?

**Mr Thede:** The past 11 years.

**Mrs Fisher:** Would you agree that you've made presentation on behalf of the community to the 25-year supply-demand study, to HR 22, HR 23, HR 24, to the Atomic Energy Control Board licensings for Bruce A and B for the past 10 years at least?

**Mr Thede:** We did that.

**Mrs Fisher:** I ask one question and it's got two parts. What has your relationship been on a local basis with site management of Ontario Hydro?

**Mr Thede:** It's been an excellent relationship with the local management and public relations and what not. As it was referred to earlier this morning, it seemed to be when you would go to University Avenue and the 19th floor, we were given assurance as long ago as five years ago that there would be a rate by next week. When that week ended, I felt that I was the loser in the chicken coop.

**Mrs Fisher:** Part (b) is, I guess you're feeling that the 19th floor and downwards located in Toronto hasn't been a whole bunch helpful to the community in the past.

**Mr Thede:** Not really. If they'd come right out and said off the bat, "It's not going to be available," or "We can't meet those conditions," or what not, we wouldn't have been leading our developers into areas that got very discouraged and moved to other provinces. We would have had very successful industries operating in the Bruce Energy Centre and there would be justification for refurbishing Bruce A ahead of Pickering A.

**The Chair:** Thank you, Mrs Fisher. I notice members are becoming very ingenious at finding ways to expand

one question into three and four. The Conway syndrome is expanding. It's remarkable.

**Mrs Fisher:** Of course. I'm learning.

**Mr Conway:** When you have an ingenious chairman, you have to govern yourself accordingly.

Gentlemen, I want to turn to page 3 of your brief. I'm anxious to get an amplification of the community impact assessment tool that was apparently both developed and applied in some way in 1993. Can you just expand on that point which you raise on the bottom, the final paragraph on page 3 of your brief.

**Mr Thede:** One of our partners is the Bruce Community Development Corp, which is the manager, and she's also my secretary. I would have to ask her to come to the front.

**Mr Conway:** They're coming next, I believe. We can let them respond to that.

Just in general, I take it that there's very little that's happened since August 13, 1997, to improve the relationship between corporate head office and your group, the impact advisory committee, on mitigating matters, at least in the short term.

**Mr Thede:** We have made no contact with the head office since that time.

**Mr Conway:** And they've made none with you.

**Mr Thede:** No. We've had local input from the site manager.

**Mr Laughren:** On page 4 you talk about wet versus dry lay-up. You say, "Reconsideration should be given to the proposed long-term term dry lay-up of the Bruce A units, as this has never been tested." Do you have any information at all that it is a reasonable proposition, or is this just wishful thinking on your part?

**Mr Thede:** From what we've been told — I'm not a nuclear specialist —

**Mr Laughren:** Neither am I.

**Mr Thede:** I'm just a farmer, but from what we're being told it's a much longer process. As far as cost and what not, I can't tell you.

**The Chair:** Thank you, reeve. I appreciate you both being here, for your presentation and the written documentation you provided for the committee. We thank you very much. You are excused.

**Mr Thede:** Once again, thanks a lot.

1100

#### BRUCE COMMUNITY DEVELOPMENT CORP

**The Chair:** I invite to the witness table, then, Lauri Cunningham, representing the Bruce Community Development Corp. The reeve has already established the advance work for your presence, so welcome.

**Ms Lauri Cunningham:** I'd like to turn it over to the chairperson of the Bruce Community Development Corp for opening comments.

**Mr Charles Merritt:** May we add our names to the list of those who have welcomed you to the Bruce



community. There is comfort in knowing that the select committee understands the importance of this issue to our area, and is providing an opportunity for input. My name is Charles Merritt. I have been a board member for the Bruce Community Development Corp since its inception in 1986, for the past three years as chairman. With me today is Lauri Cunningham, who is the manager of the Bruce CDC.

A written copy of our presentation has been provided, as well as the impact assessment and assumptions related to the August 12 NAOP decision. Lauri will review the key points of the submission, and we will make every effort to comment on your questions.

**Ms Cunningham:** Good morning. Just to provide a little bit of background as to the Bruce Community Development Corp, it is a not-for-profit corporation affiliated through Industry Canada's community futures program. We have a broad community economic development mandate. We have been in existence since 1986. At that time, it was established basically to assist with the economic community adjustment needs in response to Ontario Hydro's downsizing of the BNPD site construction workforce.

Over the past 10 years, the Bruce CDC has worked in active partnership with the community in efforts to effect positive change and economic diversification. This partnership has also included a positive and constructive relationship with BNPD site management. Over the past decade, however, efforts to implement diversification strategies have been undermined by Ontario Hydro corporate senior management.

With respect to the NAOP community impact, Ontario Hydro's board decision of August 12 sacrifices the socioeconomic health of this community. The effect of losing most of the 1,726 direct BNPD jobs within the nine impact municipalities along the south Bruce lakeshore has been assessed by our corporation using a tool that was developed for very similar purposes in the early 1990s. I'll come back to Mr Conway's question.

A copy of that impact assessment is attached for your review. In fact, what we have done is an update in terms of providing a cumulative effect of the first two years, which is the brunt of the hit in terms of the community. We have also provided the assumptions surrounding how those calculations were formulated.

Highlights of the impact assessment over the next two years effects 1,276 direct job losses from the BNPD site to the Bruce community. Remember that 79.5% of the BNPD workforce live within the nine affected municipalities; therefore, we factored that into our calculation.

This represents a 9% reduction in the total Bruce lakeshore impact area labour force population; a 35% reduction in the total BNPD site workforce population; an 11% total population decrease to the nine impacted municipalities; an additional secondary job loss of 995 and additional employment losses related to community services, including schools, hospitals and police; gross income loss of \$102 million and a disposable income loss of \$74 million; an increase in housing will affect housing

values, therefore assessments and, as Mr Kraemer so adeptly pointed out, municipal receipts, which threatens the viability of municipalities; it also increases demand on the income support programs, both employment insurance and social assistance; and it directly increases the hardship and stress for workers, families and communities.

As a single-industry community, we are not in a position to economically adjust to this level of impact. Immediate intervention is needed to stabilize the impact on the community and return Ontario Hydro to nuclear excellence. We see these as interrelated and achievable goals. However, we also recognize the need for a new creative and entrepreneurial culture to make this happen.

The following is a summary of key objectives and related strategies, in response to the recovery plan. It includes specific actions related to the recovery plan and steps to address the immediate impact to the community, as well as initiatives to enable economic diversification to finally perhaps be achieved. The Bruce Community Development Corp is respectfully requesting that the parliamentary select committee consider these factors in your deliberations.

With respect to the community impact, we are requesting that a professional independent analysis of the NAOP be conducted to confirm the appropriateness of Ontario Hydro's August 12 decision, with specific consideration given to the economic and social consequences related to the BNPD impact area.

Specific actions may include:

Seeking ways and means to safely preserve a curtailed but continuous operation of Bruce A, concurrent with a refurbishing program for Bruce A, in which the private sector may be an equity participant.

Preparing a community plan detailing the socioeconomic recovery strategy and costs to mitigate the loss of BNPD employment income. The impact community may seek full retribution from Ontario Hydro and/or the Ontario government, premised on established financial precedents such as Elliot Lake.

Determining Ontario Hydro's outstanding financial responsibility to the BNPD impact community, premised on both the hard and soft costs required to fully mitigate the socioeconomic problems imposed by the loss of over 1,700 jobs. This would include a calculation and amortization of the economic fallout that Ontario Hydro's plan will have on each municipality within the impact community.

With respect to worker adjustment, we are looking to provide supportive programs and services to assist impacted workers and their families — when I say "impacted workers," please remember that our constituency also includes the secondary job loss factor, the additional 995-odd families that are going to be in the same predicament.

We are also looking to:

Assess their skills, training needs and transitional support requirements to assist with the re-entry into the labour market.

Establish a central and coordinated professional centre offering support services and programs to assist with

employment search, retraining, worker and family counselling.

Develop creative incentive programs to encourage existing business and industry to expand, resulting in additional employment opportunities.

Enhance existing financing and advisory services to assist with the creation of new businesses and therefore new jobs.

The diversification strategy for the area is premised on the Bruce Energy Centre. We need to stabilize the existing industrial base at the Bruce Energy Centre and create a unique environment for expansion and new industry attraction. These actions include:

Ensuring a low price for steam to the Bruce Energy Centre throughout the life of the existing Ontario Hydro 25-year supply contracts, as well as finally securing a price for electricity to the Bruce Energy Centre that is competitive with Manitoba and Quebec.

We need to establish a marketing program explaining the vision of the BEC as a fully integrated industrial ecopark, premised on process industry using cogenerated steam and electricity. This industry would also provide by-products to adjacent industries which would be used as feedstock.

We need to attract energy-intensive industry to locate at the BEC to avoid future electricity transmission charges. This is premised on electricity generation becoming competitive and a charge being incurred for delivering electricity. Industry within the BEC would purchase electricity without a transmission charge, given proximity to the site.

We need to promote private-public partnerships in developing new processes to use off-peak electricity and cogenerated steam to manufacture renewable transportation fuels, as Sam noted, those being ethanol and synthetic methanol.

1110

Transfer the Bruce Energy Centre infrastructure to a private sector or perhaps community corporation to own, operate and expand the BEC electricity, steam, sewer and water system.

We also need to address the issue of competitive infrastructure to make the BNPD impact community infrastructure competitive with other Ontario jurisdictions.

To do this, we need to continue with our existing efforts to retain public access to the CN rail corridor between BNPD and Stratford; promote partnerships resulting in the installation of a large natural gas delivery system to the BEC; and ensure that the delivered cost of natural gas is competitive with gas that is delivered to places, such as London, Sarnia, Barrie and Toronto.

We need to develop and grow the progressive telecommunications strategy — fibre optics — to meet and exceed current and emerging industry trends, standards and requirements.

In conclusion, we're very concerned that the NAOP was conceived in absence of considering all factors, including the impact to the community. It is equally frustrating that Ontario Hydro is choosing a plan that

again impedes the potential for economic diversification through expansion and development of the Bruce Energy Centre.

The Bruce community has been placed basically in double jeopardy. If the current recovery plan proceeds uninterrupted, the south Bruce lakeshore area will suffer two distinct but two related traumas. As a result of the NAOP proposed lay-up of Bruce A, growth at the Bruce Energy Centre becomes that much more important in efforts to provide replacement jobs and income. However, Bruce energy proponents are being actively pursued by other jurisdictions outside Ontario with offers of competitive energy rates and infrastructure services.

Due to Ontario Hydro's decision over the past 10 years to impede negotiating competitive rates for the Bruce Energy Centre, industry is now seriously considering relocation and new development investment outside the area. The export of these industries, technology and innovation presents a real and immediate second impact to the our communities, as well as to Ontario.

The Bruce Community Development Corp believes that the recovery of nuclear excellence in Ontario must and can be achieved, and further that this recovery must be accomplished without sacrificing the Bruce community. From the Bruce CDC's perspective, the BNPD impact community has always chosen to support Ontario Hydro, to diversify and to develop rather than litigate and mitigate for failure. Thank you.

**The Chair:** Thank you very much, Mr Merritt and Ms Cunningham. We appreciate your presentation. There's time for one question per caucus and let me begin with Mr Kwinter.

**Mr Kwinter:** I just wanted to get your reaction. As one of the objectives in the diversification strategy, you talk about "attract energy-intensive industry to locate at the BEC to avoid future electricity transmission charges." Are you aware that there's a lot of speculation that this white paper that is coming down hopefully very shortly is probably going to recommend that the Hydro operations be split? There's speculation it might be split in two or maybe in three, but certainly the feeling would be that there would be one company that would do the generation and the other one would be the transmission.

As a result of that, there's probably going to be some stranded assets and some stranded debt and the only way they can recover that is to apply some sort of surtax on the transmission because people will be able to feed into the grid, but they're going to have a responsibility whether they're from outside the province or outside the country to help ameliorate this particular stranded asset-debt basis, which means that regardless of whether you're next door to a nuclear generating station or further down the line, you're still going to have pay that and as a result it's still going to be a problem. Have you taken that into consideration or have you looked at that?

**Ms Cunningham:** I think one of the things that I'm aware that the private sector in the negotiations and the community in their negotiations with Ontario Hydro have been trying to impart to them is that when we have a



Bruce Energy Centre, which is a high-energy user, high-industry activity and has the potential to develop more, one of the things that we need to do is provide an over-the-fence rate to eliminate those transmission charges, which would become a competitive advantage to this area. Much like Toronto has 407, 401 and the highway net system, we would have a transmission advantage.

**Mr Laughren:** I'm struck by a couple of parts of your presentation which deal with subsidies, either to business or to the community. I'm sure you're aware of a mood across the province, certainly encouraged by some, that businesses should not be subsidized, period. Communities should not be subsidized. You're on your own and the fittest will survive. What I want to know from you is, do you think you've got any hope of getting a program through that would give incentives to business, as you say on page 3, or to communities, as you say on page 5?

**Ms Cunningham:** With respect to "develop creative incentive programs to encourage existing business and industry to expand," I think there are already incentive programs in place primarily through Human Resources Development Canada which can provide an income subsidy or a wage subsidy program and a training subsidy for new employees that industry takes on or business takes on. It doesn't have to be industry.

In addition, there's also a program called the self-employment assistance program which assists new business startups. There may be some flexibility and some room to negotiate where that level of assistance could either be enhanced or prolonged in the event that that business generates enough activity to warrant the hiring of additional staff. I think those programs and services are already there. We just have to take a creative look at how they can better be applied.

**The Chair:** Ms Johns.

**Mr Conway:** Now over to the economic Darwinians.

**Mrs Johns:** This is the first time we've had a financial analysis of the economic impact and I just want to check some of the assumptions, if I might, if that's okay with you.

First of all, the job loss up in the top corner for years 1, 2 and 3: 1,032, 570 and 124, right out of the IIPA report?

**Ms Cunningham:** Those were provided by Ontario Hydro Nuclear.

**Mrs Johns:** You make the assumption that 55% of job losses will eventually go on EI. Is that how I should be reading that? I'm looking at your calculation of EI primary and you have the dollar values times the weeks times 55%. I assume the 55% is the number of people you believe you will move to EI, so 45% you're believing will transfer?

**Ms Cunningham:** What we're saying is, we are assuming that 70% of the affected employees will be offered and will take transfer positions, leaving 30% within the community. Of that 30%, once their severance program or once the time is such, they will go on to EI. It's 50% of those I think we calculated and of those, 50% will move on to social assistance when their EI runs out.

**Mrs Johns:** Okay. I'm interested because I did my MBA thesis on — I'm going to sound like an egghead here — the multiplier effect. How did you get the 0.78% as the secondary job impact?

**Ms Cunningham:** The 0.78% was actually — I should make reference to, in 1992, I believe, the Bruce Community Development Corp, then under the watchful leadership of another manager, actually developed the model in consultation with some consultants, and it was at that time called the community concerns document. So this tool is basically a reflection of that tool.

I just pulled this out last night because I wanted to see how we were doing. To be very honest with you, this tool was developed because at that time there was some thought that there would actually be an expansion at the plant. The tool was developed to provide a basis for planning to municipalities and to see what the positive impact would be. Since it was developed, it has never been used in that regard, unfortunately.

**The Chair:** I thank you very much, Ms Cunningham, and Mr Merritt. I appreciate your presence here and your presentation to the committee. I know that if members of the committee have additional questions, they will table them and you'll be able to respond to that in writing. We would appreciate hearing from you.

**Mrs Johns:** Could I table my third question now? I therefore would like to if the 0.78% that they used has ever been tested and ever been proven to be valid.

**Ms Cunningham:** A really quick answer.

**The Chair:** Ms Johns has found a new way to expand her time. By all means, do give a quick answer and then we can dispense with a 45-cent stamp.

**Ms Cunningham:** The 0.78% was calculated based on 1991. It has proven to be true. In fact, we recently checked with Statistics Canada and they are using — for every \$1 million income lost, there is a 12-person secondary job loss. When you work the numbers backwards, we are right on.

**The Chair:** Thank you. Hydro accepts that information?

**Ms Cunningham:** Hydro has certainly the information. They have not commented on their interpretation as to its validity. But we haven't heard from then, so I guess silence is consent.

**The Chair:** Thank you very much, Mr Merritt and Ms Cunningham. I appreciate your presence and the information you've given to the committee today.

1120

#### CITIZENS FOR RENEWABLE ENERGY

**The Chair:** The next witness is Siegfried Kleinau, which is Citizens for Renewable Energy. There is a document for members of the committee that you'll find tabled with you. Welcome to the committee.

**Mr Siegfried Kleinau:** Good morning. My name is Siegfried Kleinau, better known as Ziggy. I'm the coordinator for Citizens for Renewable Energy with over

point out that quite a concrete region.

giving me the time to make

erations are a top priority for statement I find made in the committee. This has also been to me in recent personal attached a copy of that. It's out — a safe, reliable nuclear to refer to that later on.

I for the committee to review performance assessment and Board's report on the findings both documents and already use in our submission to the board on the Bruce B licence wa.

s nuclear operations sunk to a From all the signals we're me from these Atomic Energy at we have attended, it's to cut back on staff and e to keep the costs down to rates are stable according to To accomplish that, staff cut many of the senior experts "shake." At the same time, tor components became eviding rapidly. Even Darlington, had huge problems and the generation is 9.5 cents per proof that nuclear is not an If people realize that most en seven and eight cents per ve an eye-opener here.

de-open, competitive energy government to ask the Advisory n Ontario's Electricity System in regard to Hydro's affairs. mission, which is the popular

n to this committee in London shortcomings of the nuclear competitive value of renewable knowledge is attached to ssion responded in their report ment on page 91: "Where re concerned, similar to other isory committee believes that o stay very much involved.... hat the process of restructd by consideration of the most r instruments to secure the and specifically to support e introduction of renewable basis added to this.

This is exactly where Ontario Hydro has gone astray by concentrating on the nuclear sector and that has put them in the present predicament.

There are already calls for a rate increase from the chair of Ontario Hydro because they're feeling the pressure. The credit rating agencies have more or less gone along with the present strategy of Ontario Hydro, but there will be certainly another very critical look at what Ontario Hydro is doing in this new strategy, especially since there's a new report before the committee here from Ernst and Young saying that this restructuring report or the report to rebuild the electricity system, especially in nuclear, is certainly missing a lot of important information.

There's a lot of doubt on whether these figures are the real figures that needed to be put before the board of Ontario Hydro. They have, more or less, not all the information.

A double-pronged approach of energy alternatives, like energy conservation and integration of renewable energy generation, was started in 1992 and then abandoned because the \$100-million cost for conservation measures, deemed to save about 5,200 megawatts by the year 2000, was called too expensive. The same happened to the RETs program costing \$22 million per year — peanuts for Ontario Hydro — over five years, which was cancelled earlier this year. We have in appendix A a number of news clippings that expand on this.

Independent power producers were offering power production to the tune of 6,500 megawatts to Ontario Hydro as early as 1990 — seven years ago — with private investment potential to the province of approximately \$6.5 billion. Most of this would still be available now if Ontario Hydro would open up the grid, and I have a news clipping in regard to that in appendix B.

Sure, at that time Darlington was about to come on stream, so there would be oversupply in generation. At today's stage, taking 4,300 megawatts out from the nuclear sector with the closing down of Pickering A and Bruce A still does not create a crisis situation. There would still be a cushion of 4,000 megawatts available if all the remaining reactors would be able to produce as expected.

Nuclear power was a dream. Now it has turned into a nightmare, a millstone around the neck of rates and also Ontario's taxpayers. We just have to wake up to the stark reality that this technology does not work now and will not work in the future, no matter how many billions of taxpayers' money we throw at it. The biggest costs we have to realize are still to come: nuclear waste disposal and decommissioning of the reactors, and we can't postpone this indefinitely. No matter how long we try to postpone the inevitable, it will haunt us and future generations. We already have signs from south of the border, where deregulation is really rampant now, to use that term. Top executives of Illinois utilities that have nuclear components have resigned en masse because they are trying to get away from the financial responsibility.









1130

Thank God there is a technology that has come a long way in being able to replace nuclear, not from one day to the next — nuclear plants take at least 10 years to build — but with enhanced integration measures, as pointed out in the Macdonald commission report, and only a fraction of the \$8 billion proposed for nuclear recovery, it will, over the next 5 years, even be able to replace some of the newer reactors.

Here are our recommendations:

(1) Abandon any plans to resurrect aging nuclear reactors. It would be highly irresponsible to increase Hydro's debt by throwing billions into an unsafe, outdated technology. There is also the threat of Ontario Hydro throwing more money into another outdated technology, which is the coal-fired. Let's remember that up until now and for the far future, there is no proven safe disposal method for nuclear waste.

(2) Take major proportions of funds, which are a fraction of the nuclear recovery cost, to immediately start enhanced conservation programs. The green community programs, of which you are all probably aware, are very eager to promote conservation measures successfully, but they've been lacking financial funding.

(3) Bring back an enhanced renewable energy generation program where private producers can provide green power, which is safe and clean, to customers willing to pay a premium in an open transmission system.

(4) Allow cogeneration and, in the transition stage to green power, gas-fired turbine generation to access the grid to complement Ontario Hydro's generation capacity and thereby create new jobs in this province.

(5) Retrain surplus nuclear employees to work in the renewable energy generation sector and installation and service. There doesn't need to be any job loss whatsoever.

I have more specific recommendations attached.

At this point, I'd like to thank you for giving me the time to make this presentation. I'll be open for questions.

**The Chair:** We have time for a question from each of the caucuses and we will begin with Mr Laughren.

**Mr Laughren:** May I commend you for coming forward with this presentation. I think it's important for the committee to hear views other than the simply pro-nuclear views that we've been hearing right from the beginning. I think that's an important part of the process.

I agree with most of your recommendations. The one that's troubling, and I suspect not just for me, is simply walking away from the nuclear reactors, walking away from Bruce A, for example, or Pickering A, because they are there, because of the massive investment that's already there and because of the huge debt that has been run up by Hydro. You need the revenues from Hydro to help pay that down, or somebody has to pay it down. My question to you is, how do you deal with that huge investment that's already there and the debt that's already there?

**Mr Kleinau:** This problem certainly doesn't go away. Ontario Hydro knows that within 40 years at the most nuclear reactors have to be decommissioned, because that's their lifespan. At the same time, they had the

opportunity to put away money for decommissioning these reactors. Officially they have it in the account but they don't have the money in the bank, so to speak. They have spent it on more capital projects. I have not much regard for Ontario Hydro's financial management. What we have to do is get back to these programs, to try and get people to consume less energy. That way we will be able to recoup costs and we will be able to eventually look at the decommissioning of these reactors. We will have to raise the rates, there is no doubt in my mind. The government just can't keep their promise.

**Mr John O'Toole (Durham East):** Thank you very much, Ziggy, for your presentation. I'm sure it must be very difficult to survive in this community holding a varied view of the status quo. I guess that's a challenge that some of us have to take in our life.

I put it to you that we have a couple of options here. We can either be dark, cold or poor or we can make what we have a safe, affordable way of life. I'd like you to respond. It's my understanding, whether it's that large windmill up here or whatever, that every form of creation of energy creates byproducts which are waste, whether it's particulates or gas or transmission lines. The whole thing is a blemish on the landscape, I partly agree with you, but I still like to have lights and heat and some kind of economic base. How do you deal with those two diverging views?

**Mr Kleinau:** When I came here, I could count dozens of porch lights blazing away in bright daylight. I think we have to look at the way our electricity is being used. At the same time, I can point out — you're talking about the 600-kilowatt wind turbine at the Bruce nuclear power plant. This energy project avoids over 1,000 tonnes of CO<sub>2</sub> per year. Ontario Hydro already had a program going where they were asking for private developers to bring in more of these turbines. If they had kept up with it, we would have quite a proportion of this clean energy on stream by now. That is actually where Ontario Hydro went amiss.

If I can just point to these other recommendations, there are 150 to 175 megawatts of renewable capacity waiting to be installed within nine months. So we have all kinds of possibilities just from the wind energy sector to replace nuclear and coal. At this time we could replace at least the firing up of these additional coal-fired plants.

**Mr Kwinter:** Mr Kleinau, thanks for your presentation. You refer to several attachments that I don't have. I was wondering if they have been made available to us or if they could be made available to us.

**The Chair:** Let me break in for a moment. There's one set tabled and we'll make sure it's circulated.

**Mr Kwinter:** I just wanted to ask you a couple of things. Number one, you referred to the credit rating of Ontario Hydro. I can assure you that without the guarantee of the province of Ontario, Ontario Hydro would not be the company that it is today. They just couldn't viably sustain it on a business case. So the credit rating of Ontario Hydro is not Hydro, it's the government of Ontario. That's what happens.

The thing I really wanted to ask you — it's not clear to me. You say, "Thank God there is a technology that has come a long way in being able to replace nuclear," but it isn't clear to me what technology that is.

**Mr Kleinau:** I can point to this booklet here from the Worldwatch Institute, which is a very well-known and very well-regarded private research company down in Washington. They are declaring that almost all of Canada's electricity needs could be produced by wind power. Of course, it would take time to bring in these installations but it certainly wouldn't take as much time as to build another nuclear plant or to refurbish these nuclear reactors.

**Mr Kwinter:** That's the technology you are referring to?

**Mr Kleinau:** That's one of the technologies; and make sure everything is diversified, so you have to look at other energy technologies too. Solar is definitely an option that is coming along very, very fast. It is coming down in price. There is reference in here that over the last 10 years solar PB panels have come down by 50%, and there is still all kinds of R&D going on to bring them down further. Ontario Hydro is part of Ontario, so in a way it does reflect on Ontario's provincial debt situation because Ontario is being brought into light as far as Ontario Hydro's bonds are concerned.

**The Chair:** Mr Kleinau, I appreciate your time and deputation. Thank you for the information you provided the committee. We appreciate that very much.

1140

#### GLENN SUTTON

**The Chair:** The final deputant is Glenn Sutton. Welcome to the select committee. There is 10 minutes for your presentation and questions.

**Mr Glenn Sutton:** Good morning, Mr Shea and members of the select committee. Welcome to Kincardine. Thank you for allowing me to appear before this committee. I'd like to thank your clerk for her assistance in preparing for my appearance. I emphasize that I am appearing as a private citizen; I am not appearing as an employee of Ontario Hydro or as a Kincardine town councillor. I am also a member of the Canadian Nuclear Society. My presentation is split into two parts as follows: The first is energy security; the second is economic development. I'm going to skip the first paragraph because time is of the essence.

I'd urge the committee to check with the MOEE and determine the quality of Ontario air when all 20 of the OHN reactors are running flat out. I believe you will find that we had the best air quality ever. Coal purchases to alleviate the effects of the NAOP will adversely effect our air quality.

To address the concept of energy security we must review some basic facts of energy production in Ontario: There is no oil in Ontario, there is no natural gas in Ontario, there is some margin to expand hydraulic power and we have natural uranium in Elliot Lake.

Hydro has committed to nuclear power production as its mainstay. As the A nuclear units are removed from service, CO<sub>2</sub> emissions will increase due to the greenhouse effect. Also, our coal purchases will support coal companies in the northeast USA. This will impact negatively on our balance of payments.

Natural gas is produced out west and moved by pipeline to Ontario. There has been some concern expressed in the last two years about the design pressure of the pipelines and the effects of MIC, microbiological-induced corrosion. Their regulator of pipelines reduced the operating pressure to 80% approximately of normal pressure for the pipelines after a massive fireball explosion out west. Gas is kept in underground caverns in southern Ontario for use during the winter. It is possible that the supply of natural gas could be depleted at the same time as several of the B reactors or Darlington tripped during the winter run.

Has energy security for our province been addressed by this committee? We have read newspaper articles about the load not being met this winter. What assurances can this committee offer that we won't freeze in the dark?

One of the strategies in the NAOP is a restart of Lennox GS with a dual-fuel concept. It will be operated with natural gas in the summer and oil in the winter. Why? The natural gas is needed for heating load in the winter to make up for the loss of nuclear-supplied electricity. Is this a sound energy-secure option? I don't know, but you should look into it. Natural gas is supplied mainly from Alberta and other western provinces. This illustrates a point of weakness in the strategy to replace nuclear power.

Would it not be better to refurbish the Bruce A units now and have them on line sooner? Consider refurbishing one unit of Bruce A at time right now starting with unit 2. Perhaps this option would have the effect of completing the refurbishing of Bruce A sooner and at the same time lowering the cost to Ontario ratepayers.

If the committee deems it necessary to supply natural gas to the BNPD, then it should give serious consideration to construction of a natural gas/biomass demonstration methanol plant at the BNPD as advocated in the report Energy Alternatives, 1981. There is a local initiative to construct a hydrogen facility at the BNPD. This should be pursued by your committee.

I bring two papers to your attention. The first one is Nuclear Hydrogen Cogeneration and the Transitional Pathway to Sustainable Development by G. Gurbini and K. Talbot. The second is Issues Pertaining to Electrolytic Hydrogen Production Using Nuclear Power by E. Jelinski and J. Stephenson. Both papers were presented at the INC93 conference, Towards a Better Future. We should aim towards a hydrogen-based economy.

Study the document A Summary Report of the Ontario Hydrogen Energy Task Force, 1981. The committee should endorse a concept of electrically produced hydrogen from base-loaded nuclear capacity.

Electric cars are much more feasible now. California has mandated pollution-free cars as a part of their strategy.



Finally, the rail system from Windsor to Kingston must be electrified. This is an idea whose time has come but it has been ignored year after year.

**Economic Development:** Douglas Point was built in 1967 as a tool of regional economic development. Major nuclear facilities were built soon after at the BNPD, including the BEC. The BNPD is Ontario's powerhouse.

Hydro started the impact grant system to help local communities alleviate the costs associated with municipal expansion of services. We can't let one third of our local population walk away without some form of assistance. This is not requesting a handout, just access to normal provincial and federal programs. There is a local community plan being formed, and I understand you had presentations last night on this. Please support those initiatives.

EDCO, the Economic Development Council of Ontario, met in Kincardine on September 12. I would like to read into the committee's records a copy of that motion. It was moved by Pat Olive, from Durham region, and Bruce Strapp, from Sault Ste Marie:

"Recognizing that Candu technology is world-leading, is safe, environmentally friendly and operationally efficient, it is necessary to look at the long-term interests of using nuclear power and promoting the technology to the world, both of which are integrally related to the economic prosperity of the province. Therefore, the EDCO board of directors and its membership support the recommissioning and the confirmation of use of nuclear technology in generating electricity in Ontario, and that this motion be sent to the Premier and Minister of Energy, the minister of MEDTT, the chairman and CEO of Hydro..." and mayors of local municipalities.

Going back to my presentation, I'd like to table with the committee a copy of a videotape that was produced by Ontario Hydro, called the Economic Development Project. It is 12 minutes and 28 seconds in length. I'd urge you to view it before you go back to Toronto tonight or this afternoon. See for yourself how our provincial economy is predicated on low-cost electricity. For 90 years, Hydro has been the engine fuelling Ontario's growth with electricity. The IIPA report has effected public confidence in nuclear power. As a nuclear engineer with 25 years' experience, I am concerned about the Candu system.

There is a public presentation tonight by the Bruce branch of the Canadian Nuclear Society at the BNPD about Candu 9. There are Candus 3, 6 and 9; 300-, 600- and 900-megawatts output. You are invited to attend. We must ensure that the Candu, Canadian deuterium uranium, reactor does not go the route of the Avro Arrow.

Team Ontario and Team Canada are promoting Canadian goods and services and technology across the world. How will the closure of the Bruce heavy water plant assist marketing of Candu across the world? Candu is a significant technical and engineering achievement. This committee must mandate that all necessary steps are taken to preserve our Canadian heritage.

I would like to ask three members a question.

Mr Conway, would you contact Robert Nixon, president of AECL, and find out why AECL and the federal government are so quiet on the closure of the Bruce heavy water plant?

Mrs Fisher, would you complete the ongoing requests for a special energy park rate for the BEC?

Mr Laughren, will you try and obtain assistance for the BNPD and BEC as provided for at the pulp and paper mill in Kapuskasing in northern Ontario vis-à-vis the Smoky Falls power station deal?

#### 1150

I also bring to the committee's attention — it's not in my presentation — a newspaper ad here from the Toronto Star, October 18. It's a big ad, an inch across and two inches deep, and it states, "Engineers-Nuclear, Ontario Province. Mechanical, electrical and nuclear engineers," and it goes on, "Commercial nuclear power experience desired. Send résumé to: Cataract Inc." I'll table that with the committee. There's also a printout from the Internet here that I'll give to you. This is in the public domain. It describes that Cataract is connected with three or four other companies.

I also have 17 copies of a booklet from the Canadian Nuclear Association that have questions and answers on nuclear power. I think if you read these they will help the committee in some of your deliberations. I'll leave that you with.

I have a tie to give to Mr Shea. It's not a blue tie; it's a red tie. I know he likes blue; Floyd likes pink. Anyway, this tie is from the Canadian Nuclear Society and it has a little maple leaf in there. It's Canadian. It's got the protons, neutrons and electrons. So a little hint to you: Maybe when you table this report on behalf of the committee and the Legislature, wear the tie that day to remind you of Canadian Candu technology.

Finally, the saying of Ontario Hydro that came from the HEPC, the Hydro-Electric Power Commission of the province of Ontario, was a Latin saying, "Donae natura pro popula sunt," "The gifts of nature for the people." Remember Sir Adam Beck's dream and vision from the past about producing power at cost. I'll leave it there. That's my presentation.

**The Chair:** Mr Sutton, thank you very much. You've actually landed up right on the button, so I appreciate that. I don't know how you knew I was a tie collector, but I will wear that. I will probably share it with members of the committee. They will all take turns sending along their notes for it, and it will be open to both sexes so they can wear it accordingly in the times available. I do appreciate that and your thoughtfulness. I appreciate the presentation of the documents and the video. The committee will try to find time to avail itself of that. That now concludes the presentation. There is no time for questioning, unfortunately, but hopefully if there is information we will try to get back and you will be able to respond to us in writing.

For members of the committee, there are no other deputants.

## GARY GURBIN

**Mr Conway:** Mr Chairman, I know that time is of some real urgency, but I see Gary Gurbin who's been in the audience all morning. Gary's a former MP for Grey-Bruce. I just wondered whether it would be possible to have a word or two from Dr Gurbin, who is now retired to private life here in Grey-Bruce. I know we don't have a great deal of time. I don't think he's been given any notice of this, but I would be interested in hearing a word or two from Dr Gurbin, if he has anything he'd like to tell us in his capacity as a private citizen, former member of Parliament and, I gather, one who had some involvement with one of the earlier presentations this morning.

**The Chair:** If I have all-party consent, if all the caucuses agree to five or six minutes, that will be fine. All right. Please, would you come forward to the witness table.

**Dr Gary Gurbin:** Thank you, Mr Chairman, and thank you very much also, Mr Conway. I didn't expect that consideration but appreciate it very much, because you're quite right, I would very much like to comment on what I think is an issue that's not only important to our community but extends far beyond that. I have a very great interest in the deliberations of this committee and the outcome.

I'm happy to leave a little bit of a background on myself for the purposes of the committee. I would like to clarify your acknowledgement of my association. Since 1991 I have been a member of the board of directors of the company called IEDC, which is Integrated Energy Development Corp. Our chairman, Sam MacGregor, made a presentation which I very strongly associate with from any understanding or experience I've had. I thought in fact he was quite restrained in his comments and anything I say now is without prejudice to that position. I will try to confine myself to my period of time from 1979 to 1988 when I was the federal member of Parliament here.

What I'm going to try to do in the three or four minutes I've got is to give a sense, particularly to the opposition members, of the Bruce Energy Centre and BNPD to this area. Douglas Point initially was created as an instrument, maybe not just of economic development, but we were far enough away from everywhere else that it was a safe place for an experiment for a first commercial reactor. Then we had this huge thing that now has been providing up to over 50% of the base load of the electricity in Ontario for some time. Then we had the energy centre, which came in certainly not with the full cooperation and understanding of Ontario Hydro.

My concern for you as members is what used to happen to everybody I saw in Ottawa. As soon as we start talking about electrons and protons and molecules, there's a veil that goes up and most of us become pretty insecure. I've had the advantage, probably because of my training, of seeing radiation cure illness, help save lives, so the peaceful use of atomic energy has always been something I've been pretty comfortable with.

During my time in Ottawa I was pretty much focused on energy and environment, and through that period of time saw the Bruce Energy Centre grow as a potential, not just prototype, but real, demonstrating model of nuclear energy which the rest of the world is going to now, I would say quite correctly from whatever I understand, to avoid the pollution factors that we have to deal with, which is not to say they don't have their own problems, watched the Bruce Energy Centre develop in spite of Ontario Hydro, you would have to say. I believe the testimony, with the exception of Mr Kupcis, I have seen this committee get from Ontario Hydro has been misleading. But it's very typical of what happens from whoever else you get here, you get them shifting the deck chairs as they try to salvage whatever they can of their own silo, so you get a lot of conflicting information coming at you.

This Bruce Energy Centre did have the potential that has been described to you — it still does — but has not had the cooperation of Ontario Hydro, because they've had their own interests at heart, trying to save their own positions, their own corporation to their own account. They have clearly been unable to do that. You've identified very well that they would never have survived if they hadn't had the guarantees of the government.

What I will say now in very short order is that the Power Corporation Act was amended in 1984; this was during my period in office. I can leave this with the committee. This gave the legislative authority and this describes the changes that were made to that act during that period of time by the province of Ontario to allow the Bruce Energy Centre to develop and flourish. Hydro could have, always could have, and could today as we sit here, in addition to what HR 22 said, made that work. The substance of that is in the changes in the act and I could table that to leave with the committee if you like.

As a federal government during that period of time, we put an airport in to help service and provide some of the infrastructure. We gave a repayable grant to allow the Commercial Alcohols plant to be there, and that was the only ethanol plant in Canada that was operating. There was one I think that was shut down for a while and now has maybe been brought up. We had studies for the deep port harbour which is adjacent to the BNPD, which would have allowed transatlantic shipping to come straight up to take products and bring in supplies. We helped, at least through that period of time, sustain the corridor for the CN to help make sure there was an infrastructure for large volumes of materials to flow to and from.

During that period of time I watched in frustration as we saw Ontario Hydro, time after time, come to the table and think they knew what they were doing and absolutely fail to make the energy centre work. They're still at it. At the end of the day, the interesting thing is that it's always the politicians that they blame, because it's a crown corporation and will hide behind either the Power Corporation Act or the fact that the government hasn't given them authority, or whatever.



Let me just say, in closing, that I have never seen them not be able to accomplish what they thought they wanted to do. I have seldom seen them do things that have been supportive of the energy centre and the private enterprise there that could have flourished.

**The Chair:** We appreciate that very much. That's to the point. I'm tabling that information with the clerk and we will make sure that's circulated to all members. That will conclude the deputations for today.

Just a point to Mr Sutton: I was also glancing at the tie. I do, once again, appreciate it. I can't help but observe it would look remarkably splendid in a marvellous royal blue, but I'll leave that entirely in your hands to design as well. He's got one. We'll take that as well.

**Mr Conway:** Far too understated for our chairman. You have to give him much more colourful ties.

**The Chair:** That concludes the deputations for today and that concludes our visit to the Bruce site. I would like to thank the communities involved. I want to tell you that this has been a remarkably important and helpful learning experience, certainly for me, and I'm sure it has been for all members of the select committee. We have been well received. There has been a great deal of information given to us and it will be taken back. We will learn, mark and inwardly digest all the information given to us and you can be certain that it will be given full consideration as this select committee deliberates its final recommendations.

For purposes of the committee, I will remind you that we continue our deliberations next week. For those who are here in these communities, may I remind you to watch the parliamentary channel. I think we're beginning to outdraw CBC and all the other channels now, so for that we're pleased. Please tune in and watch the deliberations. I remind you that on Monday there are deputations. We have a very extensive list of deputations from 2 until 6 and 7 until 9 on Monday. On Tuesday we have a series of expert panellists coming in to deputize before the committee. On Wednesday we will adjourn to the Pickering site and Wednesday evening, as you know, we will have hearings that will be combining both the Darlington and Pickering sites. On Thursday we'll attend upon the Darlington site and review that as well. We are continuing with our hearings and with our visits, and that will be next week's agenda.

Again, I would like to thank all the deputants who have met with the committee on this visit. All have spoken passionately. They have expressed well and they have offered a number of very important suggestions that I know will be considered by the committee. I appreciate it.

At that point then the committee will now adjourn, it being 12:05, and return to the Legislative Assembly.

*The committee adjourned at 1203.*











## CONTENTS

Thursday 30 October 1997

Integrated Energy Development Corp; Commercial Alcohols Inc; Canadian Agra Corp.....	H-403
Mr Sam MacGregor	
Mr Doug MacKenzie	
Mr Doug Fletcher	
Port Elgin and District Chamber of Commerce .....	H-411
Mr Kevin Carter	
Mr Mark Kraemer	
O.C. Long Contracting .....	H-415
Mr Clayton Long	
Mrs Lenore Long	
South Bruce Impact Advisory Committee .....	H-417
Mr Harry Thede	
Mr Murray Thompson	
Bruce Community Development Corp .....	H-419
Ms Lauri Cunningham	
Mr Charles Merritt	
Citizens for Renewable Energy .....	H-422
Mr Siegfried Kleinau	
Mr Glenn Sutton .....	H-425
Dr Gary Gurbun.....	H-426

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H-15

H-15

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**Select committee on  
Ontario Hydro nuclear affairs**

**Comité spécial des affaires  
nucléaires d'Ontario Hydro**



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## LEGISLATIVE ASSEMBLY OF ONTARIO

SELECT COMMITTEE ON  
ONTARIO HYDRO NUCLEAR AFFAIRS

Monday 3 November 1997

*The committee met at 1404 in room 151.*

**The Chair (Mr Derwyn Shea):** The committee will be in session as we start now, on the third day of November, public deputations. You can see we have a number of deputants to take us through most of the day. There are a couple of spots where deputants have just called in to indicate they are unable to be with us. What I propose to do, as we get to the end of the day, is to take an hour and we'll go into closed session and begin to discuss issues such as the writing of the report and so forth and do some of the business today that we might otherwise have to do in subcommittee.

**Mr Monte Kwinter (Wilson Heights):** Are you going to be able to move everybody up?

**The Chair:** We're trying to collapse as much as we can, Mr Kwinter, so we can expedite the matter. We've done what we can. There are a couple of spots, but not many. I think we've been able to get reasonable efficiencies.

What I'd also like to do is indicate, for the purpose of Hansard, that there is some measure of pride today. Our legal counsel, Mr Power, was able to complete the New York City marathon on the weekend and has in fact received this medallion presented to him by the Yellow Cab Co.

*Applause.*

**The Chair:** I think a round of applause is appropriate. He claims he came 22,000th out of 21,000, so we obviously wish him well. He used up the cab chits all the way through it. We're very proud of you. He did that with no training whatsoever, and so let the Americans be terrorized by the future potential of the Canadian challenge. Imagine what would happen if we actually trained.

**Mr Robert Power:** I just can't imagine.

**The Chair:** You might not even make it. There you go, Rob. Congratulations. Wear that with pride; we're proud of you. I trust the legal clock wasn't running while you were running.

Let's continue here now. So we're clear what we're going to be doing, we will do the business of the committee in camera at the end of the day. That will allow us to truncate some of the activities that would normally be required for another date and another time for the subcommittee.

## ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

COMITÉ SPÉCIAL DES AFFAIRES  
NUCLÉAIRES D'ONTARIO HYDRO

Lundi 3 novembre 1997

## NORTHLAND POWER

**The Chair:** We begin with our first deputants. We have 20 minutes in most cases. Our first deputation is Northland Power. For the purposes of Hansard, would you be good enough to identify yourself and your colleagues at the witness table, please.

**Mr Jim Temerty:** Thank you, Mr Chairman and members of the committee, for this opportunity to make our brief presentation and answer your questions. I'm Jim Temerty, president of Northland Power. I have with me Fred Brown, our executive vice-president responsible for operations, and Paul Vyrotsky, who is vice-president of development. Some of you may know Paul. Paul was formerly with Ontario Hydro, where he was the executive responsible for non-utility generation. He's been with us for the last couple of years.

I will take a few moments to make some introductory comments, but before that I thought I would let you know how our presentation will go. After my short introductory remarks, I'll be turning it over to Fred Brown, who will be speaking to our view of the risks and rewards ahead for Ontario as Ontario grapples with energy issues. We'll be speaking to what the independent power industry can do and we'll be speaking to what our vision is. We'll be answering the question as to what is required for the independent sector to move forward with the opportunity that's ahead of us.

Briefly, by way of introduction, Northland Power is an Ontario company. It was established 10 years ago as a company that designs, builds, owns and operates power projects. We're happy to say that we're the largest independent power producer in the province of Ontario, with 250 megawatts in operation. Some people will remember that about six years ago we had 750 megawatts under contract with Ontario Hydro, but with the then surplus in energy generation in the province, that was cut back to 250 megawatts and we left 500 megawatts on the table. Those 500 megawatts would have been sorely needed today.

We're also an international player. We have a significant presence in Ukraine, where we are 51% owners of a district heat and power project in the city of Kiev, which project supplies the city with a lot of its electricity and a great deal of its district heat. That plant has the capability after modernization to generate 300 megawatts of electricity and 600 megawatts of thermal power.



With that brief introduction, I'll turn it over to our operating executive to speak about the risks and visions and opportunities as we see them in Ontario.

1410

**Mr Fred Brown:** First I'd like to state what may be obvious to many of you, but for those of you who aren't familiar with the independent power sector, the key benefits are also major risk mitigation strategies. Obviously, if it had been independent power, you would not be struggling with the current struggles that you're considering today. The debt obligation, the billions of dollars, would be carried by the private sector, not by the government. The myriad of risks that are associated with power — cost overruns; the issue of completing on time, which ultimately becomes also a cost factor; the performance or the capacity factors in the plant; and ultimately the kind of issues you're struggling with right now, the maintenance costs and implications — are all borne by the private sector in independent power.

A key facet of independent power is that not necessarily, but more often than not, it involves cogeneration. What cogeneration ultimately means is efficient use of the fuel and a lower overall energy cost. By that I mean in most of the installations both electricity and the heat associated with it.

To that end, we are working with many potential users of cogeneration in the province where they would see a direct benefit in lowering their overall energy costs. Our last project at Iroquois Falls saw several millions of dollars saved by the Abitibi mill there on their heating costs, because that came as a byproduct of producing the power.

We use primarily natural gas, but in other cases wood waste. The environmental impacts of our plants are as good as they get, natural gas being as clean a fuel source as you can use today.

We do not see ourselves as in any way replacing Ontario Hydro but rather being part of an energy portfolio that allows for a diversity of supply fitting where it should fit and providing economic benefits to the province.

The question you're no doubt asking is, given today's circumstances, what can independent power do immediately and what can it do over the medium term and the longer term? Our guesstimate of what's available today in terms of the plants that are in operation today is somewhere in the order of 100 megawatts now of surplus power. In our own case, our Iroquois Falls plant has between 10 and 20 megawatts of surplus power that could be made available instantly. Then there's a category of minor upgrades to the plants. We see that as another 100 to 200 that can be brought into play very quickly, six to nine or 10 months. We can bring extra power in play with a little more lead time in our existing plants. For example, in Iroquois Falls we could bring in another gas turbine, another heat recovery system, and within about 18 months we could be providing another 50 megawatts in that installation.

When it comes to new plants, the sky's the limit in terms of the capacity of additional power that can be

brought on. It can be brought on in about 24 to 36 months, depending on the circumstances.

No doubt you're asking the question, what's the cost of this incremental power? As always, it's a more complicated question than a simple net answer, but let me frame it for you. If you have the perfect cogen application where it's a balanced load between electricity and power, that is the least expensive option and you can get power for about 3.5 cents a kilowatt in Ontario. If it's an inefficient mix and blend, it could go in the order of 5.5 cents. It really depends on how much you're able to take advantage of that ability to produce two sources of energy from the single fuel, which is cogeneration.

Our view of the future and the vision of where the power sector is going or should go is to distribute it — by that I mean power generation — close to the user: clean, efficient and low-cost energy, and total energy, meaning you get all the benefits of the electricity and the heat or whatever the requirement is for that thermal energy that's a byproduct and use that as efficiently as you can.

If you read the press, they talk in terms of hydrogen fuel cells as being the ultimate fuel source or energy source for all of us in our homes. That's going to take a few years to unfold. The question is, what do we do between now and then and how we do proceed?

We believe the government should encourage the pursuing of local opportunities today, not a few years from now but today, to maximize that potential. We think you need to develop a balanced mix of cogeneration at the local level and the Ontario Hydro offerings. Cogeneration, if it was started today in a big way, would not become anything like the dominant source of power in the province but would certainly be a dominant contributor to the incremental power needs of the province. To do that, we think we need forms of competition and open access. I'd like to talk a little further about what we think is required in order to pursue that opportunity.

Essentially we think the IPP or independent sector needs to be unshackled. First of all, we need the direction clarified. We suspect the white paper will do that. We think the current obstacles to pursuing cogeneration in an aggressive fashion, where industry needs it for competitive reasons and cost-structure reasons, need to be removed.

We think the load retention strategy of Ontario Hydro and load retention rates should be discontinued. The most recent example was in August when the board met to approve the \$8-billion investment. They also approved, we understand, a load retention rate for Shell Oil in Sarnia, which seems illogical and inconsistent to us.

In order to do this in the most efficient way for the province, there needs to be the ability to have backup power rates that are fair and/or wheeling rates where other sources of backup power can be realized for those that are pursuing cogeneration. We think there needs to be legislative support ensuring that Ontario Hydro will cooperate with this direction.

Finally, in this environment we need stability in order that the financing and investment decisions can be made. It's no different than a country that's looking to attract

investment into a sector. They need stability and predictability.

With those things available to us, we believe the independent sector can rise to the occasion and address the short-term power needs in the province, which we understand can range from 1,000 to maybe as many as 4,000 megawatts in the next few years. But most important, if we don't move today to pursue that, it won't be there in the year 2000 and we'll end up perpetuating the current circumstances that we're in.

**The Chair:** Thank you very much. There being about three minutes per caucus, we'll begin with Mr Laughren today.

**Mr Floyd Laughren (Nickel Belt):** I appreciated your presentation. Was it a matter of oversight, deliberation or convenience that you made no reference to the debt of Ontario Hydro and the responsibility of people who now plug into the system?

**Mr Temerty:** No, it's not oversight. In fact, we considered this morning whether we should speak to that or whether we should take a question on that. We debated and decided that it might not be for us to speak to that, but we were prepared to answer the question when it came. If you have a question on that, I'd be happy to tell you our view.

**Mr Laughren:** I sure do.

**Mr Temerty:** I think you heard my reaction when we met privately in your offices. My quick reaction was that everyone should participate in the burden of the stranded costs. I repeated that to my colleagues since then several times, including this morning. But life isn't that simple and my colleagues deliberated some and I'm persuaded that it's a bit more complex and that consideration should be given to the impacts of spreading that burden right across the board evenly versus perhaps some kind of approach that would consider the competitiveness of our industry. Industry, after all, is a friend to the community.

Philosophically, I am for. We all got into this problem together. I think you know that. But at the same time, I'm also for making sure industry can compete with jurisdictions that are neighbouring to our own. The solution might lie in some kind of approach that says, "Okay, everybody carries the burden, but perhaps this sector carries it somewhat less, or at a discount."

1420

**Mr Laughren:** A very short question and I think an easy answer: If you were producing power using gas, without any cogen component, what would be the price, the cost?

**Mr Temerty:** It would depend on the size of the power. We did that calculation in preparation for this afternoon. You can do a combined cycle plant today without cogeneration at perhaps a premium of about half a cent, if I remember, to no more than a cent against a realistic cogeneration environment. Combined cycle is changing every year. Technologies are improving and you can now get efficiencies, in per cent, in the low 50s, meaning you can extract energy from that gas and turn it into electricity at a rate of about 51%, 52% and even higher.

Ontario Hydro operates its plants at about 30% to 34%, so you get amazing efficiencies.

Cogeneration is the best way to go, but people dream about perfect cogeneration where there's perfect balance and you never get the perfect balance realistically. The penalty for combined cycle versus cogeneration, the right size of combined cycle, which would be about 250 to 300 megawatts, that size, not much larger and not a heck of a lot smaller, is not a very big penalty.

**Mr Doug Galt (Northumberland):** Good afternoon. I am just curious as to how you see your organization and what you can do in this nuclear recovery program. How can you plug in? How can you be helpful in this particular aspect?

**Mr Temerty:** I'm glad you asked that question. This is a big problem for the province, but we needn't be downbeat about it. We can be upbeat about it in that it's also a huge industrial opportunity. There is a feeding frenzy of private sector power development happening all over the planet. Our strategy 10 years ago was to establish ourselves in the province, build a critical mass and then go out and market the province's capabilities around the world.

We were at one point 750 megawatts contracted. We got pushed back to 250 megawatts because of the history you know. We're ready to build those 500 megawatts that we were pushed off of and build significantly more than that. I know my colleagues in the industry would say that the independent power industry, in terms of its capabilities, is unlimited in its ability to produce cost-effective, clean power very quickly.

**Mr Galt:** You're talking about cogeneration and your involvement. Should private industry be involved with all kinds of production of electricity, whether it be hydraulic, nuclear or fossil fuel? Do you see private enterprise involved in all of them? A lot of people in Ontario are very nervous about nuclear plants being privatized and that's really what I am coming around to.

**Mr Temerty:** Yes. If I had the opportunity, I wouldn't do nuclear, but that's a philosophical thing. I notice that around the world there are plenty of jurisdictions where the private sector is doing nuclear and is doing it very well. Nuclear aside, certainly our company would be happy to engage in any mix of energy generation opportunities. I think there ought to be a mix, including wind power and solar panel and fuel cell kind of stuff, just to keep us moving along with the technology as it unfolds.

**Mr Kwinter:** Mr Temerty, in your requirements you list dependability, accountability and predictability in the electricity marketplace. What does that mean to the IPP?

**Mr Brown:** Fundamentally, raising financing requires that you can give a confident, predictable stream of revenue. In the current state we're in, where we don't know what's going to happen, we're in a state of flux, so raising the financing is that much more difficult.

If the province wants power on stream in two years, we have to start today and we have to have the ability to forecast a revenue stream that we can take to a banker and get him to loan us some money on. In the current state we



don't know what the power rates are going to be. We need some security to be able to raise that financing, whatever portion of it is the debt component of the project. In days gone by, that was a high component. In the future it'll be less, a much higher equity component, but you still have to raise that money from the banks.

**Mr Kwinter:** The reason I'm asking is, I'm trying to determine whether the IPP is in a position that they either will not be able to provide the energy unless they get fixed-rate contracts, or are they in a position to build a merchant plant and then go out and see where they can get their customers?

**Mr Brown:** Our view of the merchant plant is it's a figment of some people's imagination and some creative story-telling. Behind almost every one of the merchant plants that anybody calls a merchant plant is a very strong base of revenue projections that are supportable to the financial community. So it's not all at-risk capital the way some people would interpret it to be.

Our view would be that in an unstable environment where you can't assure the investment community of what's going to happen, you can't count on getting the financing, and if you can't count on getting the financing, the projects won't go forward.

There are many players who will come in and tell you, "We'll do it." They'll tell you what you want to hear. But the common sense of it is, nobody is going to build a \$100-million, a several hundred millions of dollars project without being able to raise financing from the markets. To do that, you have to have some security and confidence around your financial projections.

**The Chair:** Thank you, Mr Kwinter. Gentlemen, just before you're excused, a response, if you wouldn't mind, to two questions. In your presentation, you've indicated you have access immediately to about 100 megawatts.

**Mr Brown:** That was our assessment approximately, a guesstimate of what the private sector has today. In our own case we can speak to one plant that has, depending on the time of year, 20 megawatts. In another project, which we would quickly expand to add another 40 megawatts, we could add another power train to one of the projects for another 50 megawatts. Those are the size and numbers.

**The Chair:** The key question I want to get at is, in terms of that excess, wherever it may be found at this point, can you indicate what you think your estimate would lead us to believe in terms of cost per kilowatt hour compared to the access to US availability?

**Mr Brown:** The answer is, in short, it depends on the price of natural gas. Currently, if we buy gas in the market today for this winter's usage, we have to pay a premium because we do not have long-term transportation. That premium is somewhere in the order of one and a half to two cents a kilowatt.

At this point in time we would need five and a half cents to do winter power, which is what we responded to the RFP that was closed last week. However, with some lead time to organize transportation, with some predictability behind it, those costs would be a lot lower. Our

view in the summer is that the rates would be substantially lower by about a cent and a half.

**The Chair:** And maybe competitive.

**Mr Brown:** Against the US markets we believe those rates will be competitive, depending on the surplus situation. Our sense is the surpluses in the northeast do not exist this winter and therefore there's probably more rate pressure than people have been used to thinking about.

**The Chair:** All right. As you take us beyond the immediate horizon into the next step where you're indicating, "Look, with immediate answers one can start to build and go through the financial arrangements," and so forth, what is your business plan indicating in terms of contracts required to make this a doable deed?

**Mr Brown:** We're dealing with a number of industrial and talking to some of the municipal distributors of power. What we need is the ability to write contracts, to be able to provide the energy to them. At the moment we're not allowed to do more than deal with one customer behind his fence.

**The Chair:** But are you talking two years, five years? In other words, you've done —

**Mr Brown:** If we had the clearances and there was a predictable field in front of us, we could respond and have power up in two years.

**The Chair:** What would be the term of contract you would also require to be able to —

**Mr Brown:** We would enter into a longer-term contract with those people. It would probably be a partnership arrangement with them, depending on their needs. We would contract into the spot markets as they emerge for a portion of the power.

**Mr Temerty:** But to try to answer the Chairman's question on the term, I can't imagine it much less than 10 years. We would be trying to go certainly as long as 15 years. We're used to 20-year and we have even 40-year contracts, but the world has changed and I think we'd be looking at something closer to 10 now and trying to maybe do a little north of that.

**The Chair:** Thank you very much for your answer and thank you very much for your evidence. We appreciate that very much. Any further information I hope you'll be able to provide in writing if necessary. We thank you for attending upon the committee.

1430

## GREENPEACE

**The Chair:** We turn our attention to the next deputation, a 20-minute presentation by Greenpeace — 20 minutes either for presentation and/or for questions — with Kevin Jardine.

**Mr Kevin Jardine:** Good afternoon. I'd like to express my appreciation on behalf of Greenpeace for the ability to speak here today.

Greenpeace is the largest environmental organization in Canada. We have about 200,000 supporters, including about 55,000 or so in Ontario. We have a campaign in Canada that focuses on atmosphere and energy issues and

in the past we very much have worked on nuclear power. In fact, internationally, Greenpeace's nuclear power campaign began at the Bruce nuclear generating station in 1979. We continue to work on energy issues currently more from an air pollution angle.

I'd like to draw your attention to the one-page summary of my presentation. I'm going to base my comments on that. I've got more information available here which I can refer to during the question period. I'd like to base my presentation primarily on looking at the environmental impacts of the implications of switching from nuclear to coal and oil. Of course there will be other presenters who will be talking about the nuclear issue and certainly a number who are talking about alternatives. I will deal with both of those issues as well, but predominantly my presentation will be on the coal and oil plants.

In 1996 Hydro generated about 20 terawatt-hours in electricity from its five operating coal-fired power stations and one oil-fired station. This resulted, according to Ontario Hydro's figures, in the release of 33,000 tonnes of smog-producing nitrogen oxides, 85,000 tonnes of the acid gas sulphur dioxide and more than 18 million tonnes of the greenhouse gas carbon dioxide.

Ontario Hydro has already publicly stated that it expects to increase fossil generation in 1998 by about 16 terawatt-hours over 1996, to about 36 terawatt-hours. Calculations suggest this will add more than 14 million tonnes of carbon dioxide, for a total of 33 million tonnes, and equivalent increases in nitrogen oxide and sulphur dioxide.

All of these numbers are a little bit mind-boggling, so what I've done is I've reduced it to the number of cars, which is a little easier to understand. The implications of Hydro switching from nuclear plants to coal and oil plants is equivalent to doubling the number of cars in Ontario for carbon dioxide or adding about a million new cars to the road for smog-producing nitrogen oxides. So we're talking about a substantial increase in air pollution.

The resulting emissions in 1998 would violate Ontario Hydro's voluntary carbon dioxide limit by 25%. As you'll see in the attached spreadsheet, Ontario Hydro actually made a commitment to keep its carbon dioxide emissions below 26 million tonnes. In fact, in 1998 it's emissions will rise, as I mentioned, to about 33 million tonnes.

Moreover, it has a voluntary nitrogen oxide limit which is also in here — I think it's 38,000 tonnes — and it would exceed that by 57%. Moreover, it would bring Ontario Hydro within 2% of violating its mandatory acid gas cap. That's under air pollution regulation 355, section 2.

I've just mentioned the implications of what Ontario Hydro has already announced. In fact replacing the 4,376 megawatts generated by the seven nuclear reactors would ultimately require 31 terawatt-hours of fossil supply, not the 16 terawatt-hours seen so far. Ontario Hydro simply wasn't using all their nuclear capability, but it is of course projecting increases in the future. Again the figures are attached, but in human terms, replacing these seven reactors with a fossil mix similar to Ontario Hydro's existing

supply would be equivalent to tripling the number of cars in Ontario. It would be adding about nine million cars on the road in Ontario or adding about two million cars to the road in terms of nitrogen oxides.

There are a number of reasons to be concerned about this. First of all, the increase in carbon dioxide would contribute to Canada's violation of its agreement in the Framework Convention on Climate Change. Canada committed at the Earth Summit in Rio to reducing its greenhouse gas emissions back down to 1990 levels by the year 2000. In fact, somewhere between an 8% and 13% increase is now projected.

Canada is about to go into the largest, most important environmental conference since Rio in Kyoto, Japan. We will be going there with our tail between our collective legs. We made a commitment back at the Earth Summit that we would stabilize our emissions, and because of companies and corporations like Ontario Hydro, we are failing to do that.

In the end there will be severe effects if the world is not able to agree to reducing greenhouse gas emissions, and they will especially have effects in Canada, as a northern country. This isn't the time to go into any of those impacts in detail, but they will include the melting of the polar ice caps, massive forest fires and the spread of diseases like lime tick disease and malaria into Canada.

Moreover, the increase in NO<sub>x</sub> — nitrogen oxides — will contribute to smog, which is a major threat to human health. Environment Minister Norm Sterling estimates that about 1,800 people a year die early deaths from smog alone in Ontario. As I mentioned, combined with the increased sulphur dioxide emissions, it will threaten to violate Ontario Hydro's mandatory acid rain agreement.

I don't want to sound like I'm saying: "Okay, shutting down the nuclear plants is a horrible thing. They shouldn't be shut down." That's certainly the point of view other people are expressing. Greenpeace thinks Ontario Hydro is obsessed with nuclear power and coal. What we are hearing again and again from Ontario Hydro is that there are no choices, that we either have to have massively polluting coal and oil plants or extremely dangerous, unreliable and very expensive nuclear plants. Unfortunately, we're hearing more of the same from Bill Farlinger. In the *Globe and Mail* this morning he said, "We have to fix the nuclear plants or it's going to be cold and dark in Ontario." It sounds as though Mr Farlinger has joined the nuclear cult he was so critical of.

What I have done is attach in your material some excerpts from a report which we released a couple of weeks ago, written by Brian Kelly, who is the former head of the green power program at Ontario Hydro. It's called Ontario Hydro's Green Power Program — Requiem or Rebirth? You're welcome to read the executive summary. If people want copies of the full report, I have it here. I just didn't want to make 25 copies of it.

I want to draw your attention to a couple of points in that report. First of all, by January 1997, Ontario Hydro had received 27 fully developed proposals for non-polluting energy sources, of which 23 are still viable



according to their proponents. That's enough to power the homes in a city the size of Kitchener-Waterloo. The viable proposals add up to 157 megawatts. That's very small. Nevertheless, if Ontario Hydro were to go ahead with those programs, which are already fully developed and ready to go within the next year or so, that would help to kickstart the renewable energy industry in Ontario.

Also, many of these proposals are wind projects on the Bruce Peninsula, so it would help to create jobs in an area which is very much going to be hit by the shutdown of the nuclear plants, in the longer term if not in the next few years.

Also, far more is possible. The wind industry estimates the potential for wind alone in Ontario is at least 2,000 megawatts. I understand you're going to be hearing a presentation from someone from the Canadian Wind Energy Association a little later this afternoon, so I won't go into that in a great amount of detail.

1440

Moreover, besides these traditional energy sources, like for example wind, there are also very underexploited renewable energy sources with costs similar to coal-fired electricity, and one very good example is landfill gas. According to Eastern Power, which operates a landfill gas facility for Metropolitan Toronto, they could put at least about 200 megawatts of new supply online, cost-competitive with coal maybe about three or four cents or so per kilowatt-hour.

I just want to conclude by again summarizing. The implications of switching to coal and oil are a massive increase in air pollution and it's not necessary to invest the huge amount of money into nuclear that Ontario Hydro is talking about. I want to stress, and probably other people have stressed as well, that the \$8 billion or so that has already been put on the table does not include the cost of renovating Pickering A or Bruce A. That will be on top of that. I want to stress as well that there are other options, including some of the ones that I've mentioned.

**Mrs Helen Johns (Huron):** Thank you for being here today. I just have a couple of questions about your proposal. When I listen to you, you don't want nuclear energy, really, and you don't want coal. You want us to go to some of the other sources.

When we took our tour of Bruce last week, they have one windmill up there right now and they said the cost of power was approximately 10 cents per kilowatt-hour, if I remember that correctly. They told us to be able to take one reactor out of service and replace it with wind power, they'd need to put up 55,000 windmills. Do you agree with that?

**Mr Jardine:** I don't know the exact number of wind turbines that would be required, but each one of those wind turbines is 600 kilowatts and that plant, I don't know how many megawatts — you're talking about Bruce A or Bruce B or combined?

**Mrs Johns:** I was talking about each reactor needing 55,000, so I was talking about Bruce A.

**Mr Jardine:** No, that's inaccurate. It would be significantly less than that.

**Mrs Johns:** Okay.

**Mr Jardine:** However, I want to stress that environmentalists aren't saying that wind is the solution or energy efficiency is the solution. It has to be a combination.

**Mrs Johns:** I understand that.

**Mr Jardine:** In fact, if we were to invest in cost-effective energy efficiency, somewhat more expensive but much cleaner renewable energy, and make up the rest with high-efficiency gas cogeneration, we could easily replace the seven reactors that are being shut down and start to phase out some of the other plants as well.

**Mrs Johns:** I understand that, but from the presentation we heard previously, we know that we can't do that for 18 to 24 months to get substantial — in that 18 to 24 months, potentially, if we didn't go into coal and we chose the plan that Hydro has suggested, the only alternative then would be brownouts. I don't think that's a particularly attractive opportunity or suggestion for the people of Ontario.

I guess my next question comes with the price of the power. It's my understanding that price of power coming out of Hydro nuclear, let's say, is about 3.5. Wind, and I know you're recommending more than wind but it's just the one I happen to know off the top of my head, is about 10 cents. From that standpoint, do you think the people of Ontario are prepared to pay three times as much for their household energy?

**Mr Jardine:** First of all I wouldn't agree with those numbers. The 10 cents is for one standalone wind turbine. The price would drop considerably if there were more built. In Quebec, for example, the price of wind, because they're going for a larger project of 100 megawatts of wind instead of one wind turbine, is coming down to about five cents or so.

I think the people of Ontario are willing to pay a little more for electricity, especially if there are programs to help them reduce their electricity consumption, in order to avoid the environmental consequences. Smog kills. Greenhouse gases have enormous effects on the environment and will have increasing effects on our children and our grandchildren.

**Mrs Johns:** I think we all agree with that.

**Mr Jardine:** We have a responsibility to act, and if we go along with the program that Ontario Hydro has outlined, the consequences will be severe.

**Mrs Johns:** I think we all agree that we have to minimize the emission levels. No one wants to see the environment damaged and we have to work very carefully at that, but we also have to ensure that we have reasonably priced power to attract jobs. If businesses leave Ontario, that means people don't have opportunities to work here and we lose lots of other opportunities along the line here too, so I think we have to find a balance that allows us to be able to provide an economic viability for our province at the same time as we find alternative sources of hydro-electricity.

**Mr Kwinter:** Mr Jardine, I appreciate your presentation dealing with the renewable energy technologies. My concern is that we have to deal with an immediate situa-

tion where seven reactors are slated to be shut down. The total nuclear facility produces about 60% of the hydro requirements of Ontario. What recommendation does Greenpeace have to deal with the immediate problem? I'd like to know your time frames for getting these wind farms into optimal operation, but what do you do in the short term? What do you do with this report that we have to comment on and how do we do it in the most economically and most ecologically viable way?

**Mr Jardine:** I would have three recommendations. First, the government should work closely with the Canadian Energy Efficiency Alliance to develop cost-effective energy efficiency programs that can be implemented immediately. Energy efficiency is often a matter of replacing lightbulbs and it can be done within a matter of six months to a year, so within the time frame you're talking about.

The second thing I would do is to recommend that the government work very closely with the Independent Power Producers' Society of Ontario and the Canadian Wind Energy Association, among other renewable groups, and first of all implement the 23 contracts that are still viable that Hydro has in its back pocket and then have a request for a price quotation, an RP, for at least 1,000 megawatts more. We know that is possible.

The third thing is to separate the grid from the generating system and allow more cogeneration to set up a system — the details don't matter as much to Greenpeace — that allows more cogeneration to come on than exists right now. Because of the fossil generation, that is by far the cleanest.

**Mr Laughren:** Thank you for your presentation. Do I understand you correctly that from what you know — you may know a lot more about the nuclear stations at Bruce and Pickering than I do — you are saying that neither Bruce A nor Pickering A — I don't want to put words in your mouth here — should be reopened and that other sources should be plugged in?

**Mr Jardine:** Yes. We're saying it's not necessary to reopen those plants and it's also not necessary for Ontario Hydro to replace them with coal and oil, that there are other options.

**Mr Laughren:** I understand. We were up in the Bruce Peninsula last week and met with some very, very worried people in that community because of the number of jobs associated with Bruce A, and not only that but spinoffs into the Bruce Energy Centre and so forth, which is a nice concept. What would you do, or has Greenpeace thought that one through about what you do about those jobs? There'd be an impact at Pickering A as well, but Bruce is more isolated and the impact would be greater, I think.

**Mr Jardine:** I think there are two things this committee and the government need to keep in mind. One is that decommissioning a nuclear plant is a long process that is quite labour-intensive. We're not talking about these plants shutting down and their staff being laid off tomorrow. The second point is the Bruce Peninsula from a wind point of view is the Saudi Arabia of Ontario. It has the best wind potential in southern Ontario. There are windier

places up near James Bay, but it's too far to run power lines up there.

I would suggest that the government take advantage of the wind potential of the Bruce Peninsula and put a lot of resources into building a lot of wind turbines in that area, and that would create a lot of jobs, because constructing wind turbines is very labour-intensive.

1450

**Mr Laughren:** As far as your comment about Mr Farlinger being part of the nuclear cult, which he made comments about earlier, it wouldn't be the first time that a cult had captured somebody's mind, would it?

**Mr Jardine:** Unfortunately not for Ontario Hydro. It tends to be an organization that sucks people in and makes them think alike very quickly.

**The Chair:** Thank you. I've just been asked by one member if we can confirm some of the information and perhaps provide the committee with some additional details of the presentation, if we can do some number accounting, and we may get back to you and ask you to provide additional information.

**Mr Jardine:** I'd be happy to.

**The Chair:** My figures were showing something in the order of 6,666 windmills to pick up the shortfall at this point. At this point I think we'd be far better off to get the figures and lay them out before the committee. So we'll probably ask you for more information that Ms Johns has asked for, some more elaboration of your presentation. I'll make sure we get that tabled before the committee. Thank you very much, Mr Jardine. We appreciate the time you spent with the committee. You're excused.

## CANADIAN INSTITUTE FOR RADIATION SAFETY

**The Chair:** May we turn our attention to Dr Fergal Nolan, the Canadian Institute for Radiation Safety. For the purpose of Hansard, if you'd be good enough, Dr Nolan, just identify yourself and your colleagues.

**Dr Fergal Nolan:** I will do that straight through. I pray your indulgence to read this presentation. There's an argument in it. It comes from consideration of the testimony as has been given to you over the last several weeks and there's a point we'd like to make about what emerges from that testimony.

Thank you for the invitation to appear before you. We have only a brief time, so I shall try to be succinct. First, by way of introduction, my name is Fergal Nolan. I am president of CAIRS, the Canadian Institute for Radiation Safety. Before that I was a civil servant for five years in the Ontario Ministry of Northern Affairs and before that an assistant professor at the University of Toronto.

My colleague Dr Reza Moridi is director of science and technology at CAIRS. Reza is a nuclear physicist, a chartered engineer of the United Kingdom and a fellow of the Institute of Physics. He also was a former university professor and chair of physics before he came to Canada and to CAIRS.



With us also is Tina de Geus, our information officer, a graduate of Acadia and Ryerson Polytechnic universities, who assists the hundreds of people, including journalists, who call us every year for independent information and education about radiation safety.

You have before you some information about CAIRS. You will see that the institute was founded in 1980 and began operations in 1981. The impetus for the founding of CAIRS as an independent institute for radiation safety was the calamity that befell hundreds of families in the Elliot Lake region when husbands, sons and brothers, breadwinners all, began to contract lung cancer from prolonged overexposure to radon gas in the deep, underground uranium mines of that area.

It's a sad story documented in the dry statistics of thorough epidemiological studies carried out by the Ontario Ministry of Labour. The human cost we must imagine. Many people have suffered; too many have died; more are sure to. All of them have suffered and died needlessly, all of them our fellow citizens right here in Ontario, and for what? For lack of a rigorous and unwavering commitment in the private sector and in the federal and provincial public sectors of the day to a radiation safety culture designed to protect people from overexposure to radiation from whatever source.

If we speak with some passion at CAIRS about a new and comprehensive approach that is needed to radiation safety in this province, you will understand where we are coming from. More of that anon.

As I said, the original impetus for the foundation of CAIRS was Elliot Lake. Since then, we have broadened our activities across Ontario and into other parts of Canada. Our head office is in Toronto. Our national laboratories are in Saskatoon. We receive no grants. We support our work by contracts and services. Any profits we make are put back into the institute to support our information and education role. We're a not-for-profit organization.

We promote, we inform, we teach, we train. We monitor workplaces, homes and schools. We carry out scientific studies of specific problems and provide laboratory services. We mediate with "good science in plain language" in controversies over radioactive wastes in the environment and on radiation safety issues in the workplace.

Twice we have been called upon for independent assessments of specific health and safety issues at Ontario Hydro nuclear generating stations: once at Pickering and once at Darlington.

You have before you also two single-page documents to which I would draw your attention. One is a list of the board of governors. I take great pleasure today in announcing publicly, for the first time, that the Honourable Monique Bégin accepted election as chairperson of the board of governors of CAIRS at the board's meeting in Toronto on October 23. I cannot tell you how delighted we all are at CAIRS that she has taken on this role in support of our efforts.

The other page to which I would draw your attention is our statement of principles. These are fundamental to the

CAIRS way of doing things. I would be happy to answer any questions you may have about them later. First, however, to the matter at hand.

As members of the Parliament of Ontario, you have been charged with a difficult task. It's a much more serious, more urgent task than anything this province or any select committee has faced before in dealing with Ontario Hydro. You have to listen carefully, question closely, listen some more, question again and again to try to find out to the best of your abilities what actually went wrong: "Have we got the whole picture?" you will ask yourselves. "Are we missing anything?" You must judge the merits of what is brought before you. You must recommend. Above all, you hope you get it right.

On behalf of CAIRS, I'd like to say two things immediately. The first is to thank you for taking on this forbidding challenge on behalf of us all. We wish you well, most sincerely, as you carry out your work.

The second is a personal impression. Since last Thursday, when we received your invitation to appear before you, I have read nearly 400 pages of testimony, edited and unedited, published in Hansard on the Internet. I have read it closely and made many notes. My first impression, if you will permit me to say so, is that you are doing a good job. At CAIRS it's the questions that are important, not so much the answers. If we miss the important questions, we'll never get to the heart of the matter. My impression is that you're asking important and fundamental questions and you are doing it persistently. The testimony is riveting.

The next question is, how can CAIRS help you, if at all, in your task? You have two big issues before you. One is safety, which has to be your primary concern. The other is new expenditures and costs, an issue running so urgently and so closely behind safety that one is in danger of tripping over the feet of the other. It won't be easy to separate the two.

Fortunately for CAIRS, the task is somewhat easier than your own. Our concern is safety, obviously — radiation safety, nuclear safety. Still, how can we help you on the safety question? Is there any piece of the picture that's missing?

You have read the remarkably forthright analysis and recommendations from the Andognini team and subsequent documents. You have heard Mr Andognini's crisp, confident and by any measure impressive testimony before you. You have heard from a forthright regulator in the person of Dr Agnes Bishop of the AECB, complete with full documentation. You have heard Dr Kupcis, very frank and with some insights on where things went wrong and why, that I personally had almost despaired of ever hearing from a senior figure in the nuclear energy industry. You have heard the present chairman and chief executive officer, Mr Farlinger, members of the current board of directors, at least two former presidents, Dr Kenneth Hare, Mr John Murphy and the Power Workers' Union. You have heard from Energy Probe, vigorous and longstanding critics of Ontario Hydro, and from others.

It's an impressive body of testimony. Is there anything in it with respect to radiation and nuclear safety that has

not been explicitly stated? In fact, I think there is. Moreover, if I'm right, it is something deep, fundamental and systemic, something which the select committee needs to sink its teeth into.

When one looks at a body of testimony as large and as competent as you have before you, one has to try to stand back from the particulars, no matter how riveting. One looks for a pattern to emerge. To be authentic it must not be forced; it must emerge. At first it is vaguely present, a suggestion here and there. Gradually, however, it takes shape until it spreads out over the whole body of the testimony and emerges strongly.

1500

The pattern that emerged from the body of testimony I have been studying was unexpected. It surprised me greatly. Perhaps it should not have done so. There have been so many surprising and unexpected things in the testimony before you that I should have expected something like this.

What emerged took shape in the form of two fundamental questions:

First, on behalf of the public interest in Ontario, the people of this province, who really is in charge of nuclear safety in Ontario, including nuclear safety at Ontario Hydro? I mean really in charge, not who appears to be in charge. Is anyone actually, really, in charge? Who cracks the whip when things go wrong? Is there any whip to crack?

Second, if it emerges that no one is really in charge, what does this say about the nuclear safety culture not only at Ontario Hydro, where all attention is focused at present, but in the larger public and institutional environment in which Ontario Hydro operates and with which it interacts? Does any such nuclear safety culture actually exist in Ontario or are we being bemused by a mirage?

In response to the first question, "Is anyone really in charge of nuclear and radiation safety in Ontario?" I have to say to you that I don't think anyone is, not actually, really in command. That is what the testimony before you suggests very strongly to me. Permit me to elaborate.

For many people in Ontario and elsewhere in Canada, there is a great puzzle in the history of the present crisis at Ontario Hydro. "Why is it," people say, "that Ontario Hydro decided on its own to shut down seven reactors? Isn't the AECB supposed to be looking after nuclear safety?" How was it that a team of Americans brought in by Dr Kupcis — kudos to our American friends, and to Dr Kupcis for bringing them in — could look at the same set of facts that our own regulator, the AECB, says in testimony it was fully aware of and decide that the nuclear safety situation was so serious at Hydro that drastic action must be taken immediately? Why hadn't the AECB done that if the situation was that bad? It doesn't seem to make sense.

In fact, the testimony and the documented evidence show that the AECB under two presidents, Dr Lévesque and Dr Bishop, had been working might and main to bring Ontario Hydro to its senses. "Plan followed plan," Dr Bishop says: good plans from Hydro, good intentions. But

somehow the plans were shuffled aside, Hydro's expressed good intentions overwhelmed by some other distraction. In fact, I would say from the evidence that the road to Dr Bishop's and the AECB's hell of the last few years has been liberally paved with Ontario Hydro's good intentions.

The explanation helps, but it raises a fundamental question: What happens when Ontario Hydro does not live up to its commitments? What if that should happen in the future, especially if Hydro is broken up or privatized or whatever? Nobody knows yet.

Certainly the AECB can shut down a reactor — it has that power — but that is absolutely the last resort. In the meantime it can advise, cajole, threaten this or that, reduce the performance rating, make life difficult. It did all of these things for the past 10 years or so as the situation got worse and worse. Nothing worked.

In fact, Dr Bishop says Ontario Hydro has the final responsibility for the safe operation of its reactors. That's not the AECB's responsibility. It's outside its mandate. And what if Ontario Hydro does not take its responsibility seriously enough, as Dr Bishop said to you was actually the case by July 1996? What happens then?

What happens then is that we have a crisis of the kind we're in now. Now, there's a fine kettle of fish. To whom does the Ontario public then turn for protection? Who in Ontario is going to act in the public interest and back up the AECB by cracking the whip over what is, after all, an Ontario crown corporation? Who has the power? Is there any whip to crack? Let's take a look.

There's no whip at the Ontario Energy Board. Rates are their business, and even then they can't tell Hydro what to do; they recommend.

The Ministry of Energy, Science and Technology has no jurisdiction on nuclear safety and is still getting organized.

The Ministry of the Environment has no authority in nuclear safety and no scientific or technical resources in radiation safety of any kind, which is why CAIRS has been called on by the ministry a number of times and has been glad to help.

The Ministry of Labour has some qualified people but no jurisdiction.

The Ministry of the Solicitor General has no jurisdiction, although it is responsible for the provincial nuclear emergency plan, but has quite enough on its plate trying to whip that into shape for next year's exercise.

What it comes down to is that the whole responsibility for public safety at Ontario Hydro falls entirely on the AECB, one relatively small federal agency. There is no backup, no one in Ontario the AECB can go to and say: "Look, we've set the standards, issued the licence for this or that reactor at Ontario Hydro. We're monitoring, inspecting and so on. We're doing our job, but they're not doing theirs. They are letting things slide and they are not paying attention to what we say. You're the owner here. This is a matter of public safety. Back us up. Crack the whip."



That's a pretty reasonable request, in our view, for the AECB to make, but there's no one in Ontario to make it to. The reason is that no one is in charge. There's no door to knock on to get attention, so the AECB goes back again to Hydro's board of directors and hammers away there. Much good that has done in the past.

What should be done? We would recommend to you that the Ontario government empower a scientifically and technically qualified body to act for Ontario in the public interest, not as a regulator, but fully respecting the jurisdiction and authority of the AECB, to act on behalf of Ontario in an oversight capacity in matters related to radiation and nuclear safety at Ontario Hydro. This body should liaise actively with the AECB and Ontario Hydro and should report regularly to a designated minister of the Ontario government on all matters of concern specifically related to nuclear and radiation safety at Ontario Hydro, the point being to ensure Ontario Hydro's compliance with AECB nuclear safety standards and directives at the very highest level.

The minister should be given authority by the Legislature to require the Ontario Hydro board of directors to implement AECB nuclear safety directives without delay and to be accountable to the Lieutenant Governor in Council for failure to do so.

That is our preliminary recommendation to you. No doubt it needs more in-depth consideration, but we need to make a start. We simply cannot go on in this backward and haphazard way. There is too much at stake for everyone. The government and Parliament of Ontario need to take a hand.

There is much more to be said also, but no more time in which to say it, on the lack of a developed nuclear safety culture in the public institutions of Ontario outside Ontario Hydro. There is more to be said too about the woeful lack of a carefully considered public policy on radiation safety generally for the proper protection of the Ontario public from undue exposure to radiation from a variety of sources, industrial and environmental. In the meantime, CAIRS will keep on working.

I thank you for listening.

**The Chair:** Dr Nolan, thank you very much. That exhausts the time for your presentation, but I personally found it of great value and interest and I know the other members of the committee did likewise. We appreciate it. It is tabled. If there are further questions, I'm sure we will be in touch with you very shortly. Thank you for attending upon the committee.

1510

#### ENVIRONMENTAL PROBE

**The Chair:** I would turn my attention to the next witness, Environmental Probe Ltd, Tony O'Donohue. For the purpose of Hansard, although you're extremely well known to me for your distinguished career on Toronto city council, if you would be good enough to identify yourself.

**Mr Tony O'Donohue:** My name is Tony O'Donohue. I'm the principal in Environmental Probe Ltd, specializing

mainly in environmental issues and particularly in energy conservation and energy efficiency.

Mr Chairman, I'm going to keep my remarks short and to the point so that I have time to answer some of your questions. I will focus on the nuclear dilemma and make some suggestions.

I have read *The People's Power: The History of Ontario Hydro*, by Merrill Denison. It was written in 1960, 50 years after Ontario Hydro came into being. It was a glowing tribute to the utility from the first paragraph to the last paragraph.

Much has changed since *The People's Power* was written. Then, the peaceful use of nuclear energy were the new buzz words of nuclear scientists, after demonstrating to the world the destructive power of the atom bomb by wiping out the Japanese cities of Hiroshima and Nagasaki in 1945.

Then nuclear experts went to work to sell nuclear reactors around the world. The door to the nuclear age was open wide with the promise of unlimited clean energy for the future, and we were mesmerized by a host of scientists promoting the wonders of science and the use of the atom for peace. Ontario Hydro got on board, as did other utilities from First World countries. They all embraced nuclear generation and began to phase out fossil fuel plants.

It has now been over 30 years since that journey into the wilderness. That journey has been, to say the least, a hair-raising experience. Our commitment to nuclear energy has always been firm, but as we get to know more about it we are not so sure any more. Many other countries have the same uneasy feelings. Down deep, I feel we want to get rid of it too.

Nuclear power in Canada means thousands of jobs and a role on the world stage to market our Candu reactors. Presently in Ontario about 60% of electricity is produced by these reactors. They are primarily used to provide base load, with the fossil fuel plants taking up the slack for peaking.

In truth, the nuclear reactor has turned out to be a Pandora's box, a type of HIV infection of the energy world. Nuclear waste or spent fuel, a deadly cocktail, active for thousands of years, is continuing to pile up on reactor sites throughout the world, and Canada's 22 reactors continue to hold their waste as the search goes on for a final resting place. We have not heard the last of that search. That debate is just warming up.

By the end of 1995 there were 415 nuclear power plants operating in 25 countries around the world and producing just under 300,000 megawatts. The light water reactor is by far the most popular, producing about 80% of that energy. The Candu, or heavy water reactor, is used in Canada and five other countries. It is generally regarded as reliable and safe, but expensive. The first Candu was built in Pickering in 1971 and seven other reactors followed, for a total electrical output of around 4,000 megawatts by the mid-1970s.

Most of the world's reactors are now reaching middle age, a period when the signs of wear and tear become evident. Some are downright scary. I visited the Ignalina

power plant in Lithuania in 1991, where two 1,500-megawatt, graphite-moderated, Soviet-type reactors are working. I prepared a report on Ignalina and presented it on my return to AECL. That report is available for anybody who wants to get a copy of it.

In a fossil plant, mistakes in operation or defects in materials are not uncommon. As well, starting and stopping require a lot of attention and maintenance. Routine maintenance can extend the life of a plant. But a nuclear plant is different. A reactor cannot be stopped and started like the fossil fuel plant. A reactor may work for a year or more without stopping, but the smallest mistake can lead to a catastrophe. Three Mile Island, Chernobyl and other accidents are examples of the potential for enormous disasters which could affect the whole world.

I believe that when a nuclear plant begins to show the signs of middle age, the time has arrived to begin plans for the decommissioning of that plant. Trying to squeeze out a few more years of an aging plant can lead to catastrophe. All we've got to do is look around and see what kind of nightmare we have in the old Soviet system.

Middle age, for most plants, depends on operations and maintenance. I would consider 100,000 hours to be a very modest figure before problems of age begin to show; 200,000 hours or about 23 years of operation is achievable but additional care and maintenance are then critical. Any time beyond 25 years is danger years. The time has then arrived to begin the decommissioning of the plant.

That brings me to the present problems of Ontario Hydro and its nuclear reactors. The seven identified, closed-down reactors should be decommissioned immediately. Money spent in repairing the reactors would be money wasted. As well, plans should be developed to begin the decommissioning of the other Pickering reactors by the beginning of the new century.

When Pickering was built, it was believed that the reactors would have a life expectancy of 30 to 40 years, operating at about 80% capacity. The many problems encountered have reduced the efficiency of these reactors and it's operating now at around 65% to 70%.

As a citizen of Toronto, I get the shivers when I think of the dormant torment of an aging reactor — and eight of them in Pickering. If I had been running for mayor of Toronto I certainly would have made it an issue in this campaign. For me, nuclear power is no longer an acceptable option for the energy needs of the future.

I look at it basically as the Vesuvius of the nuclear system. The long-range plan for the province should be to build no more nuclear plants and begin the decommissioning process for the remaining reactors. That announcement would be good news to herald in the new millennium. I expect that Darlington would be the last plant to be decommissioned, beginning in about the year 2010.

Rather than waste the \$8.8 billion in repairing the reactors, Ontario Hydro would be well advised to use the money to stimulate the way of the future: getting more from less. This will be a whole new industry for future generations, and I am disappointed that Ontario Hydro has gone in the opposite direction.

Perhaps the best example of a public utility leading the way in energy management is the Sacramento Municipal Utility District (SMUD) in California. SMUD opened its Rancho Seco Westinghouse 913-megawatt nuclear plant in 1974. Twenty-one years later, in 1995, they closed it and began the decommissioning process. The energy needs of Sacramento were studied by a variety of engineers, environmentalists and local people before the plant was closed. A plan was developed to help SMUD do without Rancho Seco. SMUD is a model for all utilities. It is operated as a municipal utility and like a business in the private sector, with energy conservation and energy efficiency as the foundation. The philosophy is simple: Get more from less.

SMUD provides loans, at lower-than-bank rates, to its customers to buy energy-efficient appliances — must be below the national standards: lighting, shade trees, solar water heaters, building retrofitting etc. It also has a large budget to do research and experiment with alternative sources of energy. It would be worth your while, ladies and gentlemen, if you visited SMUD. I think you'd get a lot out of it.

Future generations will inherit a planet with the fossil fuel gauge almost on empty, a landscape littered with old, closed-down reactors and nuclear waste dumps contaminating the land for thousands of years. It sounds like a nightmare, but that is the way the future is unfolding. It all makes me so angry, and there is so little I can do about it.

The freedom we have in our democracy allows our politicians to be visionaries, but rarely accepts the vision if it costs more. The horizon is the next election. Very little thought is given to use our resources sparingly and leave something for those who come after us. The sad thing is that few would be elected if that type of philosophy would be advocated, because we would have to pay more and be a little bit more frugal.

I am not going to suggest that you commit political hara-kiri today on this one issue of nuclear power in Ontario, but I am going to suggest to you collectively that you put aside your party labels and adopt a whole new package of reforms in energy and electricity which will address the present and the future as well.

The future is just as important as the present. The quality of life for future generations, if life is to continue, will depend on how we take care of our planet and how we use our dwindling fossil fuel resources. There is plenty of room for us to be visionaries and do things right, but there is little time. I therefore make the following suggestions to you:

- (1) Begin the decommissioning of the seven nuclear reactors now.
- (2) Begin the decommissioning of the remaining Pickering reactors by January 1, 2000.
- (3) Prepare to phase out all the other reactors and begin decommissioning them all by 2010.
- (4) Adopt a policy of more from less.
- (5) Bring in legislation to phase out wasteful appliances, lighting, heating, ventilation etc.



(6) Use the \$8 billion earmarked for the seven reactors to help set up the more-for-less fund.

(7) Legislate that Ontario Hydro place the \$2.6 billion collected from electricity bills into a special fund for decommissioning, which cannot be used for other purposes.

Thank you, ladies and gentlemen.

1520

**Mr Kwinter:** As always, Tony, it's interesting to read your views, and you certainly have a lot of experience in it. Just a couple of observations so you know where we are.

The \$8 billion that has been earmarked is not for the seven reactors. A good chunk of that is for replacement fuel while work is being done. I think the amount that is going into actual hardware is less than \$2 billion. The other is for replacement energy during the period of recovery.

I agree, and I've heard from James Schlesinger, who was in charge of the US atomic energy program, that once a reactor shuts down it never reopens. The concern I have with your recommendation is that somewhere along the line — we are 60% dependent on the nuclear facility. They are going to shut down seven reactors. They are going to try to get these things back up. The short-term requirements are what I'm concerned about. At the present time we have a situation where there is surplus energy in the grid. It looks like this can be done, but to follow your particular strategy would mean that by 2010 at the latest in Darlington, you'd shut down all the nuclear. Is there, realistically, an opportunity to replace that 60% in that time frame in a way that has got to have economic sense? You can't just say, "We're going to do this," if it makes no sense, if we're no longer competitive and we can't provide energy to the people who need it at a price they can afford.

**Mr O'Donohue:** From a practical point of view, you're probably very right. I'm not suggesting that you fire up the power plant again, which is 1,200 megawatts. I'm not suggesting that. What I am suggesting is that you follow the examples shown by SMUD, which closed down its nuclear reactor and went into a conservation and energy efficiency program and replaced the need for the 913 megawatts. I think that's the philosophy they have to follow.

To answer the other part of your question, what do you do in the meantime to fill the gap, yes, I think you will have to stoke up some of the Lakeview generating plants, the plants you have, to try to fill the gap, but your focus has to be on energy conservation and energy efficiency. The \$8.8 billion would be very well spent in developing alternative sources of energy, in developing the approach to buildings that they have done in Sacramento and taking that kind of a more-for-less approach.

If you were to say, "We're going to build more plants," I think that's the wrong road. You don't have to do that. The money is in the efficiency. It's a whole new industry out there when you can get, for example, a refrigerator that will save 75% of the energy that the old one used to use, that kind of approach, and lighting is the same way,

about 70%; you get rid of the incandescent lighting and put in your metal halide and high-pressure sodium and lighting like that. That's the philosophy you've got to follow.

Unfortunately, I think you're in the wrong mode here with Ontario Hydro. They have really destroyed the system in their approach to it. They turned down cogeneration a few years ago, although they gave it some lip-service, but they never did anything about it. They stopped us when we tried to do a plant in Toronto because it was interfering with their monopoly. That's the kind of thing you're faced with. It's a more fundamental thing. If you went into cogeneration, from a fuel point of view you'd get probably about twice as much energy out of the fuel than you're presently getting out of Lakeview.

**Mr Laughren:** Thank you, Mr O'Donohue, for appearing before the committee. I think you've put your finger on what we are wrestling with. When you talk about Darlington and the B units being decommissioned from 2010 on, that's not something we're wrestling with and I don't even see that as part of the mandate of our committee. That doesn't mean you're not perfectly entitled to express that view, of course. It's the A units at Bruce and Pickering that are causing us — I don't want to speak for my colleagues — to really anguish over what the solution is, because that's a problem. We did hear, as Mr Kwinter said, that once you shut down a plant it's not going to reopen, not with any kind of efficiency. So we are agonizing over that, at least I am.

I worry, partly because we went there, about the Bruce Peninsula. I wonder if you have any thoughts to share on that. There's a place that is, in communities like Kincardine and Port Elgin, very dependent on the Bruce station and the Bruce Energy Centre. If we shut down the Bruce A, if Hydro does, and if Bruce B is recommended to be shut down, that's going to play hell with the Bruce Peninsula. I wondered if you have any thoughts about how that could be at least ameliorated so that it doesn't devastate that community.

**Mr O'Donohue:** I'm looking at our own model here in Toronto as an example. We have what they call the Toronto integrated energy study over the last four or five years, called the TIE study, where rather than put a lot of money, \$500 million, into the transmission lines, the suggestion was that we build smaller cogeneration plants. I would say that under the phasing out of nuclear power plants, what we should be doing is building smaller cogeneration plants, and that probably would fit into the category that would address some of the problems you have with respect to —

**Mr Laughren:** Build them up there, you mean?

**Mr O'Donohue:** Yes, build them up there.

**Mr Galt:** It's rather obvious that you're not too enthused about nuclear power. Certainly as time has evolved we have been told how the preventive maintenance of these reactors has been ignored and has been for some years, and finally, somebody has had the intestinal fortitude to stand up and say, "Enough is enough," have an

investigation and carry it out, and we're at this particular point.

Regardless of what you use to produce electricity, there is some environmental concern. As you were going through, you seemed to be rather heavy in your opposition to nuclear as a way of producing electricity but rather light on alternatives. You talked about conservation, that we need 60% conservation if we're going to get rid of the nuclear reactors. You talk about refrigerators that are 75% more efficient. You talk about tremendously improved lighting efficiency. But that's a small portion of the total consumption. We still have heavy industry out there, with great big motors requiring tremendous quantities of electricity. Where is that going to come from? What are your suggestions to compensate for that?

**Mr O'Donohue:** I think I'm fairly clear on that. First of all, I used to believe in nuclear energy until I went to visit the Ignalina power plant in 1991. That gave me a different view of nuclear energy, the way we were sitting on the edge of the cauldron. What I would like to focus on, if I were in your position, is the opportunities you have with the Ontario Hydro breakup in the monopoly. I would get some of the private sector working to go into cogeneration plants. I think that's where the answer is. I would hope that smaller municipalities — well, Toronto is a big municipality. I think our load is about 4,000 megawatts.

**Mr Laughren:** And getting bigger.

**Mr O'Donohue:** Yes, and getting bigger. We could put up a couple or three or four plants within the perimeter of the city that would look after all that, and you wouldn't have to worry about it. That's something I think no planning has been put into. Hydro has never looked at it. They've always looked at protecting their monopoly. When you look at it from that point of view, yes, you have some very serious problems. I'm saying you've got to change your total outlook on it and let the private sector and the municipalities come in and build cogeneration plants. I think that's the answer.

**The Chair:** Thank you very much, Mr O'Donohue, for attending upon the committee. If there are any other questions, I know you'll respond to them in writing where necessary.

To help the members of the committee, may I remind you that sometimes your questioning is reaching to or exceeding the two-minute mark with the preambles, and that doesn't help you a great deal when there are only two minutes to ask a question. I have been a little bit generous in the time of responses, so please mark that. Also note that it is not the usual tradition of the committee to engage in participatory questioning, so we will try to keep that confined to one caucus at a time, and that would be helpful.

1530

#### WEST HILL COMMUNITY ASSOCIATION

**The Chair:** Let's begin with the West Hill Community Association, please. We have a maximum of 20 minutes

for questions and/or answers, but that includes the presentation. Welcome to the committee.

**Mr Clem Okonkwo:** My name is Clem Okonkwo. I am the president of West Hill Community Association. The purpose of our presentation today is to draw the awareness of the government and members of the Legislature to the fact that the communities around the Pickering power stations are not frequently consulted on issues that affect the area in terms of the spills that have occurred in that area. We live very adjacent to the plant itself, and we are completely isolated from most of the decision-making processes.

From 1976 to 1978, we noticed a lot of ecological destruction in that area, and we decided to meet together as communities and investigate what the causes could be. In the process, we discovered a lot of things which eventually were done on an individual and collective basis. Our community is not sponsored by any organization, we are not financed by the government, and we do not solicit money. Most of us are professional people who spend our spare time making the communities look better than they are.

Eventually, most of the findings we discovered were related to the government: the municipal government, the provincial government and the federal government. The responses we got were that they were not allowed to infringe on the nuclear power station or decisions that would affect its operation; that we should convey our complaints to the Atomic Energy Control Board in Ottawa. Apparently, within the same period was when their application for licensing was due for renewal. We made a petition in Ottawa presenting our findings, with slides and other documentation to support our discoveries, causes and recommendations in comparison with other areas with similar types of operation.

Eventually, we were turned down, told those recommendations were not appropriate in light of reconciliation of staff reports in logging operations and causes of the accidents and recommendations made in suppressing those concurrences. We continue to monitor the area from time to time, but each time there is an accident there, when we find out there is an accident, we try to call the public relations officer there, but we don't get any response. They turn us to the Attorney General's office, who refer us to the police board in charge of the area.

We also requested the emergency preparedness operations that we were told were in effect, and we were misled on several occasions; it was not until around 1994 that we are told where to get a capsule and those who were involved in it.

The population in that area has increased dramatically and there have not been any exercises or drills to acquaint the newcomers or the old people with what they should do in terms of emergency. From time to time, the area there is quite difficult to deal with. Highway 401, that leads to Kingston from Toronto, is frequently closed like a bottleneck, that only one particular zone could be utilized at a time. We're wondering what will happen in terms of emergency, what other measures or alternatives the gov-



ernment has in place to evacuate people. We are told also that in times of emergency the automatic telephone dialling system will wake everybody up. We have not seen this in place. It has not been drilled; it has not been exercised. This is quite a complete misconception and misleading to the public.

We are also told the locations where the capsules would be retrieved or the people who were involved. We made an effort to communicate with those people, and they were completely ignorant of all these assumptions and claims.

What we are asking for is, in terms of safety, what is the public expected to do and whom shall we communicate with? There is no literature or any type of educational processes going on there. More schools are being built, and in comparison with accidents involving radiation that have occurred in other places, a nuclear power station is not a very advisable place. Beside that, it is located within a seismological area, and if there is any earthquake it will not withstand the tremor.

Because of the constant accidents that occur in that area, we're recommending that the government look twice in terms of phasing it out, because of frequent misleading examples or procedures that are not actually in existence.

I don't know exactly where we stand, whether the population there will continue to increase, with the frequent accidents or radiation occurrences. There have been many emissions of fissions in the air from time to time in that area. Nobody monitors the air quality there. Nobody monitors the water quality there, with injection of steam water into the Ontario rivers. In the west part of it, families get together and swim and do all sorts of things there. We are asking for public participation, public education and, more important, safety as a whole.

We have made some comparisons of the Pickering power station with other areas where accidents have occurred. Some of us are quite familiar with the operating systems in nuclear plants. Nevertheless, we are completely isolated in terms of community efforts, community awareness and community education. That's one of the purposes of our coming today.

1540

**Mr Laughren:** Thank you for coming before the committee. Have you ever been part of the process of emergency planning in the areas of the Pickering and Darlington plants?

**Mr Okonkwo:** No. We are told it's being handled by the Durham regional police officer whose name we mention in the brief, but we have never been informed. We live in Highland Creek, which is just the next boundary to Pickering, and we feel we should be involved in something like that.

**Mr Laughren:** I gather they're developing a new plan, I think for next year. The police chief came before us and indicated that they were developing a new emergency measures plan. I wondered whether you had either sought to get information about that or had been invited to be part of that process.

**Mr Okonkwo:** No, sir. We have been in touch with Durham Nuclear Awareness, based on the fact that our findings were published in the *Toronto Star* some years ago. On two separate occasions we went to Ottawa to make deputations on the same issue. Nothing came of it, and this is one of the reasons for demoralization in our community, that nobody seems to care.

**Mr Galt:** Good afternoon. We've been told regularly, over and over again, that these units are safe, that it does relate to efficiency, that provided we're not pushing them, they are indeed safe units. We've been told this by many groups, and that one of the problems we've had over the last many years is that there hasn't been the proper routine maintenance.

The AECB, the Atomic Energy Control Board, oversees and looks after those. Are you not comfortable with agencies such as this keeping an eye on operations such as Pickering?

**Mr Okonkwo:** We've heard that there could be suppression of information and also collusion in the sense of people trying to protect their own alliance or organizations. I don't think anybody would be very pleased to go to a doctor who would tell him he's crazy, so in that aspect, most of the consultants they hire do what they tell them to do. We do not think they overstep the boundaries or what their limitations were, because they are paid by the time or by the piecework or by the hour.

Not only that, we seem to be very familiar with some of the problems they encounter, but we're not being involved in any type of decision-making or contributions as far as what should happen in times of emergency.

**Mr Kwinter:** While you were giving your presentation, I was reading ahead through your written presentation. I understand your concerns, but as my colleague has stated, one of the things that has been repeated by every responsible official is that safety is not a concern, that they are satisfied that the nuclear reactors in Ontario are safe.

Having said that, I can understand your concern. From what I gather from reading, a lot of it has to do with improper communication, that you're not being made aware of what's happening, you're not being made aware of who the people are who represent your particular area, your particular community, on any kind of program in case there's an emergency.

It would seem to me that one of the ways to ease some of the concerns of the people you represent is that there should be some kind of meeting with the officials to make sure that the lines of communication are really there and that you are at least informed of what's happening. Do you feel that would go a long way in helping your problem?

**Mr Okonkwo:** That's part of it. Another part is if there had been no problems there, there wouldn't be any recurring accidents. Most of the accidents happen and we hear about it and we know about it. We ask, but we are not given information because they don't want to stir up public concern. Maybe they believe it's going to die down

by silence. It doesn't help. Many people have moved out because of scenarios like that. They were afraid.

As we said earlier, we have made some investigations. Many of us are professional people, and everybody contributes from his own area. We know quite well that plant is situated within an earthquake zone and there is no protection. There was no type of acumen when they built that plant to make provision for earthquakes. If there is any earthquake there, I don't think there wouldn't be any accident.

**The Chair:** Mr Okonkwo, thank you very much for your time and for attending upon the committee. I thank you very much for your brief. It's extensive, and we'll take that under advisement.

### CANADIAN WIND ENERGY ASSOCIATION

**The Chair:** We will turn our attention to the Canadian Wind Energy Association, Jim Salmon, please.

**Mr Jim Salmon:** My name is Jim Salmon. I am the vice-president of the Canadian Wind Energy Association. Thank you for the opportunity to speak to the committee today.

I had intended to show some coloured slides which I had made up, but apparently it's not available at the moment, so you can go through my information, which I also apologize for not delivering beforehand. I'm new at this. There are copies of my slides in your packages. If you can follow along, that would probably be helpful.

I am going to speak about wind energy today. In the context of this committee, I'm going to try to address at least two of the three terms of reference of the committee. I will not address financial justification — that doesn't seem appropriate — but I will talk about economics and viability of alternative supply options, and that will peripherally address environmental impacts.

I have subtitled my presentation: "We have lemons. Why doesn't anyone want to make lemonade?"

If you look at the next slide, there's some information on wind energy. I'd like to go over it quickly. I'd like to put in perspective what the state of wind energy in the world is. For example, World Watch Institute in Washington stated in 1996 that wind energy is now the world's fastest-growing energy source. That is indeed true on a percentage basis. In that year, 1996, more wind energy was installed in the world than nuclear energy.

Canada has far more wind energy potential than its current total use of electricity. There is no shortage of wind energy. In 1996, for example, half of the residential needs of a city the size of Metropolitan Toronto was installed worldwide. In Germany alone, enough wind energy was installed to supply the residential needs of a city the size of London, Ontario. Shell International, which has never been any great fan of renewable energy in the past, although it's coming on board, estimates that by the year 2050, 50% of the world's energy will be supplied by renewable resources, and the two renewables they mention are wind and solar.

This summer the United Nations stated in a report that "Wind generation has been recognized worldwide as a technologically mature energy source which can supply clean, sustainable, reliable and cost-effective power."

There's a table on the next page which shows how much wind power is installed in the world. In that table, you can see that in Germany, for example, there are 1,675 megawatts of installed wind power. That's enough to power about 367,000 Canadian residences. If those residences were in Europe, it would probably be double that amount, because Canadians use a lot of electricity. In total in the world, there's enough wind energy installed to power about 1.4 million Canadian residences. Germany, for example, installs approximately 600 to 700 megawatts of wind power a year. That's about one and a half nuclear reactors.

There are a couple of tables which show prices versus year. I apologize; one is in US cents and one is in British pounds. The only thing I want to point out is that the trend is down. It has been down for the past 20 years. It continues to go down and there is no reason to expect it not to.

On the next slide, I talk briefly about the history of Ontario Hydro with wind energy. They have in the past undertaken a variety of small test and demonstration programs. In 1995, they installed one 600-kilowatt turbine. That was a single turbine at the Bruce, which I think the committee may have seen. It is capable of supplying about 150 households, that single turbine. It has been running very reliably and producing power for Ontario Hydro since it was installed.

In 1994, Ontario Hydro started their renewable energy technologies program, which was focused on technology development, demonstration and learning. The centrepiece of this was a request for proposals for up to 125 megawatts of grid-connected renewable energy projects. After a torturous two years of proposal and review, it was cancelled summarily in 1997, with cost being cited as the reason.

The situation in Ontario today: Is there any wind resource? I guess that's the first question you would like answered. I happen to do work in wind resource assessment. As far as I'm concerned, there is lots of wind resource in Ontario for wind energy. There is an estimate from an American company, R. Lynette, of 24,000 megawatts. That would be for fully established wind development throughout Ontario. The good sites are along the eastern shore of Lake Huron and the northern shore of Lakes Erie and Ontario. They have a good wind regime. They have lots of agricultural land, that is, cleared land without trees, and they have a grid system. They have everything technically required for wind energy.

### 1550

A financial resource? If firm contracts were available, the money would become available. This is in terms of independent developers putting in wind developments. The other alternative would be utility financing right through Ontario Hydro, and that would drive down the price.



There is a picture of that turbine that you may have seen. There's also a map which shows where the wind resource is available.

In Ontario, if the utility did decide to go ahead and install wind energy, once contracts and planning permission were in place, the initial turbines would be up and running in less than a year. Wind energy does not take a long time to get going. You phone the factory and ask for some wind turbines. They ship them over. You build a foundation for them and you put them in and you hook them up to the grid. That's one nice thing about wind: It's modular. If you need 100 megawatts next year, you only have to put 100 megawatts in. You don't have to put 4,000 megawatts in all at once. You don't have to finance it all at once. You don't have to build it all at once. You put in what you want.

The economics: As it presently stands in Ontario, it's about eight to 10 cents a kilowatt-hour. That's what the developers tell me they can install wind energy in Ontario in those good regimes for. We could expect reductions to five to seven cents per kilowatt-hour, say, by the year 2000, with larger projects, with newer and more modern equipment or with utility financing.

What are the benefits of installing wind energy in Ontario? It would be a reliable replacement for the electric power of the laidup nuclear units. There would be no CO<sub>2</sub>, NO<sub>x</sub>, SO<sub>x</sub>, toxic metal or chemical emissions. There would be no radioactive waste to worry about. There would be no solid waste to dispose of. There are no known health risks with wind energy. It would create quite a number of high-quality jobs in Ontario. There is export potential, but that would only occur if there were a large industry created here. The investment would be in Ontario and not in, for example, Ohio. There would be fuel security; no foreign government can cut off your wind. Fuel price security would accrue, because once you've built it and you run it, there are no other costs. There are no fuel costs. There is an O and M cost, which is very low for wind energy. You would have diversity of generation; you wouldn't have all your eggs in one basket. And there's a natural synergy with the abundant hydro-electric power that exists in Ontario; wind and hydro work very well together. I can explain that to you, if you'd like, later.

So why is there no wind power generation in Ontario? Well, there's no market. Ontario Hydro is the only customer, and it doesn't want any.

How should we proceed to get wind energy installed in Ontario? I have a two-part plan here. I think we should reactivate the RETs program that I referred to previously. In a report by EcoPathways Consulting, they said of that plan that there are still 160 megawatts of original projects still available to go — in other words, the proponents would be ready to go ahead with those projects — capable of producing about 560,000 megawatt-hours per year, and it would be at an average guaranteed price of 10.2 cents per kilowatt-hour. The premium cost of doing this, over the absolute cheap, dirty cost, would be about \$75 million, interestingly enough less than 1% of the \$8 billion that has

been mentioned with respect to recovering the nuclear units.

Just as an example, by doing this, about 0.7 teragrams per year of the 4.0 teragrams per year of CO<sub>2</sub> that Hydro needs to reduce to reach 1990 levels would be achieved. That's 18% of that goal.

Part 2 would be to issue further unrestricted RFPs for wind and renewable energy. The original RETs program from Ontario Hydro had some restrictions which drove the price up for the proponents of the program. In the second request for RFPs, it's recommended that these be unrestricted and that they be allowed to go up to any size they want so that the proponents can achieve economies of scale.

There's a large resource available to do this. The price will go down. Seven cents a kilowatt-hour is currently being bid in the US, and that's seven cents Canadian. There's potential significant economic benefit to do this. There are some other issues to do with wind energy. One is jobs. Wind power creates more jobs per unit of energy produced than most other technologies; by some estimates, it's four times as many jobs. In terms of CO<sub>2</sub> emissions, climate change, the upcoming meeting in Japan, having wind power within the Ontario Hydro mix would be of benefit to them, particularly if enforceable CO<sub>2</sub> emission limits are mandated at that meeting. Certainly the Prime Minister seems to be enthusiastic about Canada putting on a good face there.

In terms of utility deregulation and future customer choice, which appears to be going forward, there would be a potential for marketing green energy. Lots of studies and surveys have shown that the public is very enthusiastic about green energy. They are also willing to pay for it.

In summary, electricity generated from wind: It's reliable, it's cost-effective, it's available in large quantities in Ontario, it creates good jobs, there are no emissions or waste to deal with and there are no known health risks. Let's proceed into the next wind-generated millennium, not back to the coal-fired Industrial Revolution.

**Mrs Barbara Fisher (Bruce):** I happen to be the member for the riding of Bruce, the one with the wind turbine generator just outside the site that the committee did get to see last week.

I believe that future energy generation in Ontario will very much lead into the blend of options you talk about. It's not hard to see the benefits of having a diversified package. But I will ask this: I, for a long time, have been a believer that if the private sector is able to compete, it should do so, and that if it wants to enter the grid — in the monopoly that existed in the past, it didn't allow for that to happen.

But you talk about 10.2 cents a kilowatt-hour. You might say that the capital costs are low, but obviously somebody has to absorb the difference between the potential production costs of anywhere between 1.7 and 3.2 from a nuclear generator. As the Bruce site seems to be significant — and I know it has been studied very extensively — how do you think we could sell that type of philosophy to the taxpayers of Ontario, to the consumer,

who doesn't look forward to any type of increase in rates today?

**Mr Salmon:** I think there are two factors here. One is that the so-called dirty energy, coal, for example, is not paying its full share of the cost. It's not paying the social cost, the —

**Mrs Fisher:** A carbon burden then.

**Mr Salmon:** Exactly, but I know that to say, "Let's have a carbon tax," today would not be received very enthusiastically either by the government or the public, but I feel it's worth saying that. What you don't pay for your fuel, you pay in your health costs, you pay in your remediation costs, you pay all the way down the line. That eventually tends to become a burden for the government. The other way is that within Ontario, Ontario Hydro itself has done surveys and they've determined that a lot of Ontarians are willing to pay a premium for their energy if it's clean.

**Mrs Fisher:** Maybe that's the way it could be competitive, if it's sold into the grid at the same rate or an equivalent rate of anybody else in terms of production and then you would find your customers for the difference in rate.

I have one other question. The impact with regard to using up prime agricultural land was not discussed, and there are tens of thousands of these types of units required to replace the volume of capacity production from the Bruce nuclear site. What do you think the agricultural community will think when their land becomes no longer agricultural land? Where is the impact to offset that now in the study?

**Mr Salmon:** The California experience — they tend to be ranchers down there — has been that the ranchers have been just delighted to get wind turbines on their land because they are always getting paid.

1600

**Mrs Fisher:** But the California model often shows the rolling landscape. It doesn't show —

**The Chair:** Mrs Fisher, we've come to the end of our time. I just wanted him to be able to finish his answer.

**Mr Salmon:** It's another cash crop for them. Typically, only 5% of the land is required for the generation. The other 95% is available. There are other benefits that accrue to the farmers too. They get roads built in to their land that they otherwise couldn't have and so forth.

**Mr Kwinter:** Mr Salmon, I've seen some of the wind turbine farms in California. It's quite awesome to drive by and see all these things going, generating electricity. But realistically, what do you feel the market share of the energy market in Ontario could be with wind energy?

**Mr Salmon:** Realistically?

**Mr Kwinter:** Do you feel it could replace all of our nuclear requirements?

**Mr Salmon:** Let me answer that by referring to Europe. Most governments in Europe are setting targets for renewable energies in the near term of 10%; in the longer term, let's call it the medium term, of 20%; and some optimistic countries, Denmark for example, are looking to get 50% of their energy supply from renewable

energy. That's in the long term, say by 2050. So you can pick any number between those.

**Mr Kwinter:** You say that in Europe most governments set a 10% target. How close are they to their target?

**Mr Salmon:** Denmark is very close to being there. Germany is, I think, at about 2% or 3%.

**Mr Kwinter:** I have no problem with the idea. I just want to know how practical it is. I know it's a proven technology.

**Mr Salmon:** It is practical.

**Mr Kwinter:** It's a proven technology. I'm not questioning that part of it. How practical is it for becoming a major dependent source of energy? I think solar, wind turbines, all of these things are great and people should be supporting them but, again, I have that nagging concern that it's fine to augment what we've got, but can we really become truly dependent on that and that alone?

**Mr Salmon:** I think that's way in the future, but I think it's possible.

**Mr Laughren:** Thank you for coming before the committee. I'm going to be as blunt as I can without offending you, I hope. I like your presentation. As Mr Kwinter says, it's really a nice component of energy. I don't put myself or other members of the committee in this category, but why is it that people still sneer at wind power? They really do. When you talk to people in the establishment in Ontario about Hydro, and quite frankly in the Ministry of Energy as well, they literally sneer at the concept of wind power. Is there a reason this continues to be the case? Is it just that it's too soon and that proponents such as yourself just haven't been able to break through? That's my spin on it, anyway.

**Mr Salmon:** I agree with you. I believe it's because the people of Ontario are not familiar with wind power or perhaps any of the renewable energies. In England when they install wind turbines at some sites, they have polls. They poll people when they go in to see the site, to see the wind turbines or the wind farms, and they poll people when they come out. When the people go in, they have something like a 30% to 40% acceptance level; when the people go out, they have something like an 80% to 95% acceptance level.

**Mr Laughren:** I'll tell you, even at Bruce Peninsula the Ontario Hydro people would fit in that category, I would say, of sneering at the windmill, even though it's theirs.

**Mr Salmon:** I don't think people in Denmark would tend to sneer so much. Denmark tends to be the country with the highest percentage of installed wind power. Their government actively promoted wind power in the early 1980s. Wind power now makes up the second-largest export in that country, second only to pharmaceuticals.

**The Chair:** Thank you very much, Mr Salmon. We appreciated your deputation.

#### HEAT, STEAM AND POWER INC

**The Chair:** The next deputation is Heat, Steam and Power Inc, Patrick Gillette. Would you be good enough,



for the purpose of Hansard, to identify yourself and your colleague at the witness table.

**Mr Patrick Gillette:** Good afternoon, Mr Chairman and committee members. My name is Patrick Gillette. For the record, my academic credentials are a master of environmental studies degree and a master of public administration degree. One of my major research fields has been on the Ontario electrical industry. I am currently the general manager of Heat, Steam and Power. My firm produces a combustion unit used in the burning of biomass and other wastes for cogeneration projects. My companion is the vice-president of Heat, Steam and Power.

I want to begin by thanking the select committee on Ontario Hydro nuclear affairs on behalf of Heat, Steam and Power for the opportunity to make this presentation. To leave the committee members time to ask questions, I will attempt to be as brief as possible. I would also like the committee members to consider our written submission as a draft of the final document, which will be submitted with the committee's permission later this week.

The technology is a Canadian invention which has received environmental approval in Canada and the United States, has a wide and varied fuel base and is ideally suited for small cogeneration in Ontario, where we believe exists a readily available source of combustible materials for fuel.

In my submission I stated that I would organize my presentation around the feasibility of small cogeneration plants in Ontario. Then, if time allowed, I would attempt to bring my presentation around to the matters directly concerning this committee.

Cogeneration refers to the simultaneous production of electricity and useful thermal energy — steam, hot liquids or gases — from a single energy source. Two primary technologies are used to produce this electricity and thermal energy.

The first method is the burning of materials — biomass, waste and fossil fuels — to produce processed heat for the production of steam, which is then used to generate electricity and then transferred, in an open or closed loop, as processed heat for industrial processes. This is the methodology used by Heat, Steam and Power and is known in the industry as a steam turbine set.

The second method is a combustion turbine unit, which produces electricity through the burning of liquid or gaseous fuels to rotate a turbine, which in turn generates electricity. Then, using a heat recovery system, the usable thermal energy is extracted to produce usable processed heat.

How much cogeneration is there in Ontario? While projections from the Ontario Energy Board, Ontario Hydro and industry experts vary, it is generally accepted that approximately 3,000 megawatts of cogeneration capacity is immediately available in Ontario. Another 4,000 megawatts to 6,000 megawatts could be easily developed over the next five years. If you refer to appendix 1, of which there are five copies, for which I apologize, there is a submission of articles confirming the preceding statement.

Partially confirming these estimates is exhibit 4.1.4, Ontario Energy Board Rate Hearings, 1993, "Reporting Results for Non-Utility Generation." This is an Ontario Hydro document submitted to the OEB. If the committee will refer to appendix 2 of this document, they will see that when Ontario Hydro requested submissions from the public and private sectors for non-utility generation in 1991-92, it received 6,025.45 megawatts in capacity. A large proportion of the electrical capacity reported in this document, between 55% to 91%, was classified as cogeneration, natural gas or as waste burning. If the Etobicoke olympic pool in Etobicoke and the University of Toronto projects are considered, which are in this document, then it is likely a large proportion of the projects classified as natural gas in that document are actually cogeneration projects. I make this assertion because both projects use thermal energy from their generating sets for heating.

Taking this into account, we have at least a partial confirmation of the documentation presented in appendix 1. This also shows that the capacity and market interest exist in Ontario for further growth in the non-utility generation sector of Ontario's electrical market.

#### 1610

To bring this into perspective, I would like to highlight Heat, Steam and Power's latest project. With Energy Plus 2000 Ltd, Heat, Steam and Power has put forward an application to produce 15 megawatts of electricity for Ajax Hydro and Ontario Hydro at the Ajax steam plant located in the city of Ajax. Moreover, in the past week another similar project has been brought to my attention. If this project is approved by Ontario Hydro, Energy Plus 2000 and Heat, Steam and Power will be investing approximately \$15 million at this site. The spinoffs of this project are as follows:

It will provide for the next 20 years, with the installation of new equipment, a stable source of economical electricity and steam for the city of Ajax, encouraging indirectly the maintenance and expansion of the city's industrial and commercial base.

The expansion of the plant will allow for approximately 3,000 tonnes of wood waste that would go to landfill to be used as fuel.

The investment being made at the Ajax steam plant will bring the latest in combustion and pollution abatement technology to this facility, leading to higher energy efficiencies and lower air pollution than is currently produced at the plant.

The \$15 million in expenditures will create or maintain jobs in heavy industry, engineering, computer technology and construction, using private sector funds.

Finally, this plant will be able to deliver all of its electricity to the grid, with minimal transmission losses due to electrical resistance. This is due to its location in the centre of the city of Ajax and close proximity to a former transformer station.

I would like the committee to note that this project will be built with private sector funds. Therefore, all the risk is being assumed by the principals involved, whereas the citizens and industrial sector of Ajax will realize many

benefits from this project at no cost to the public sector. Moreover, this is a true cogeneration project with an existing customer base, and we expect that this project, if approved by Ontario Hydro, will double the plant's current levels of efficiency.

Now I would like the committee to consider the economic benefits of 100 such projects, or 1,500 megawatts of additional cogeneration on the market, which is equal to the approximate capacity of three to four of the reactors that have been closed.

The installation of 1,500 megawatts at \$1,000 to \$2,000 per kilowatt of installed capacity would equal \$1.5 billion to \$3 billion in private sector investment in the province. In addition to the employment this would create, there would be an increase in the overall tax base and an opportunity for retirement funds to be channelled into developing this generating capacity, thus opening Ontario's electrical market to the long-term financial benefit of the average investor.

The economic foundation of cogeneration is that it uses energy more efficiently. Currently, many firms generate thermal energy for industrial processes and buy electricity from Ontario Hydro. To generate this electricity, Ontario Hydro is also, in most cases, generating thermal energy. In both cases, a large amount of this thermal energy is vented to the atmosphere. Cogeneration simply reuses the firm's thermal energy to produce electricity. This inevitably reduces costs for all concerned. Through a net reduction in costs a stronger industrial base will be created in Ontario.

The above economic variables are well established. The question the committee must consider is whether Ontario can ignore the benefits being achieved in other markets where cogeneration is promoted.

The environmental benefits of cogeneration are also well worth considering. By exploiting the thermal energy produced by firms for cogeneration, there is a net reduction in pollution emissions. By increasing Ontario's efficiency in its use of energy, there is also a net reduction in the use of non-renewable fossil fuels. Moreover, the increased use of biomass and municipal waste as a fuel would create a renewable fuel base and reduce the net tonnage going to landfill.

The final environmental point I would like to make is that restrictions on CFCs will encourage industry to find alternative air-conditioning technologies. One option is absorption chillers which utilize steam. In the case of operations like the Ajax steam plant, there will be an increase in demand for steam during the summer months, making these operations even more profitable in the future and contributing to finding an alternative to CFCs.

At this point, if there are no questions, I would like to summarize my preceding statements and comment directly on the question facing this committee.

**The Chair:** Please just complete.

**Mr Gillette:** What is my time limit right now, sir?

**The Chair:** You have about another 10 minutes.

**Mr Gillette:** There is adequate evidence, which I gathered in just a few days, to show that there are sufficient sources of non-utility generation to meet some or all of the

approximately 4,280 megawatts of generating capacity lost by the seven reactors closed at the Pickering and Bruce plants. The bulk of this capacity is either hydro-electric or cogeneration, fuelled by biomass, natural gas or other waste materials, with their inherent economic and environmental benefits.

If the above factors I have outlined are considered, there are sound reasons to consider allowing this option to be developed in the province, whereas in addition to these factors there is the initial cost saving of up to \$8 billion to Ontario Hydro and the provincial government if some or all of the reactors in question are mothballed.

My two graduate degrees were spent examining Ontario Hydro's nuclear program in detail and the possible ways it could be reorganized. Therefore, I am now putting forward my own personal observations based on my research on the subject at this point.

First, the \$8 billion in question is not the end to the maintenance costs on these reactors. In fact, as this committee knows, the bulk of the \$8 billion is for fuel and restructuring costs. In appendix 3 of my submission you will see a maintenance estimate from 1986 showing the projected expenditures on the now closed reactors entitled Ontario Energy Board Hearing (OEB), 1985 Rates, exhibit 4.20, "Fuel Channel Replacement."

The bulk of this maintenance, it is my understanding, has been completed at Pickering, whereas it is my understanding that Bruce still requires intensive maintenance, much of which is outlined in this report. The importance of this document is that these costs have been ongoing, and Ontario Hydro was well aware of the problem. Now recent developments have forced their closure after large amounts have been spent, with further expenditures required. The utility has come to the government once again asking for further financial support, the bulk of which is related only to fuel costs.

If the \$8 billion is added to Ontario Hydro's debt, it will place the utility in a worse position than it was in the early 1990s, whereas this time there are no staff reductions open to reduce costs. The only alternative is for the government to directly assume this debt. The only other option is to maintain the current system and increase the price of electricity.

I would also like the committee to note that the two arguments that are made in favour of a public monopoly for electricity have just been brought into serious question. The first question is whether Ontario Hydro can guarantee a stable supply of electricity. The combination of seven reactors closing with 11 reactors needing repairs and the increase in debt will weaken that argument. The second question for maintaining the monopoly is whether Ontario Hydro can maintain the current prices, ie, keep them low.

The scenario I have outlined above means one of the two arguments is not necessarily valid. Moreover, with consideration, both can be brought into doubt.

Ontario's electrical industry over the next 40 years also must recapitalize to the tune of \$40 billion. During this period, which is now starting to happen, another \$13 billion must be spent on maintenance costs. In addition to



these costs are the approximately \$8.68 billion to \$13.32 billion in upfront nuclear waste disposal costs, of which Ontario will be responsible for a large proportion, and approximately \$2.5 billion in reactor decommissioning costs are also coming due, for a total expenditure of approximately \$64 billion to \$68.82 billion over the next 40 years in addition to the utility's current debt. I make this point to say that if you add \$8 billion on to that bill, it is questionable whether the utility can survive in its present form.

I would like to conclude right now by saying I believe cogeneration can absorb some or all of this current capacity coming up with the nuclear reactors. Therefore, I will make my one and only recommendation to this committee: Ontario Hydro should be allowed funds for one year to meet its increased fossil fuel costs. During this time, the Ministry of Environment and Energy should request bids from all interested parties who wish to sell power to their local municipal electrical utility or Ontario Hydro at a set rate. These submissions should then be reviewed, and those that are feasible should be given power contracts at these rates, plus inflation, for the next 10 years. Any remaining capacity should then be transferred to Ontario Hydro, with sufficient funds to bring the needed reactors back online. While many details would have to be worked out to make this recommendation work, I believe it is feasible.

In the remaining time I would be happy to answer any of your questions. Moreover, Heat, Steam and Power and I would be happy to provide any assistance this committee may require. I want to thank you for this opportunity to submit this presentation.

**The Chair:** It's like a horse race, isn't it, trying to finish off in time. Actually, we have slightly less than two minutes per caucus. Let me begin with Mr Kwinter.

**Mr Kwinter:** Thank you for your presentation. Over what period of time would you anticipate non-utility generation would replace the power that would be lost by shutting down the seven nuclear reactors? How long would it take you to get it up to that?

**Mr Gillette:** One to two years. It depends on what kind of situation we're dealing with, but if the fuel is available and there are no apparent difficulties — for example, this 15-megawatt plant — a time scale of one year is not outside. It is pushing it a bit, but one year is possible, two years definitely. That's the advantage of cogen. Especially the CTUs at times can be put in quicker than the steam turbines, because essentially they're dropped as a set, a natural gas line is attached to the system and it just starts generating power.

1620

**Mr Kwinter:** You say that if fuel is available. Have you done any studies to see whether or not fuel would be available under that scenario?

**Mr Gillette:** Now are you talking about natural gas or biomass?

**Mr Kwinter:** You tell me.

**Mr Gillette:** With natural gas it's just a question of it depends how far the natural gas line is. Normally it

doesn't take more than a year for them to send a line to the facility. Most times facilities that will be able to use cogeneration already produce thermal energy and are probably using natural gas. So there is no delay in getting the fuel there.

**Mr Laughren:** Thank you for coming before the committee. My question has to do with your one and only recommendation, as you put it. There's an assumption there in that recommendation, if I read it correctly, that the laid-up reactors will be restarted.

**Mr Gillette:** I would suggest it's not an assumption, but it leaves the option open.

**Mr Laughren:** "Any remaining capacity should then be transferred to Ontario Hydro with sufficient funds to bring the needed reactors back online."

**Mr Gillette:** Fair enough. I believe personally that there would be no need to bring them up online. As I said, when Ontario Hydro went open for bids, they got 6,024 megawatts, which is still there.

**Mr Laughren:** I appreciate that. All I was concerned about was that your last sentence seems to me anyway to imply that the reactors will be restarted, but earlier on in that recommendation you talk about 10-year contracts, and if they're going to restart them, it would be hard to justify the 10-year contracts.

**Mr Gillette:** I see the point. For example, if 3,000 megawatts were granted, that amount would be taken from the nuclear division and transferred over to the non-utility generators permanently. For example, that would allow this committee or a similar committee to look at the reactors in a worst-case scenario. So the worst one would fall off as that power capacity was filled, the next worst one and down the line. There may be a point where, for example, one reactor is quite good and it doesn't cost much to repair where it makes more sense to bring that online. You want to do that cutoff point. But as I said, this is a general statement and would have to be worked out with Ontario Hydro.

**Mrs Johns:** I too am looking at your recommendation. I'm interested in the independent power producers, if you will, being able to sell power to the local MEUs at a set price and I'm interested in that set price. Is that set price higher than the people of Ontario are paying for power now, or less? How do you see that?

**Mr Gillette:** These are going to be private sector projects. For the most part, cogen produces that three to four cents per kilowatt-hour, and for any project to get financing they would have to produce in that range. I would assume that the power purchasing price would be set at around five cents per kilowatt-hour, which is below the current price at which people are purchasing, but you've got to remember these entities are, by and large, making their savings in two ways. They will be producing power for themselves at cost and then they'll want to sell excess out for the most part. So these are additional revenues. For example, if they produce at four and they sell at five, this still leaves for the municipal electrical utility, for example, to make a profit on transmission. A three- to four-cent

quote, and I can provide it for you, is from an Ontario Hydro document on privatization in 1993.

**Mr Johns:** If someone produces power for themselves — for example, a company comes in and produces power for themselves and then gives the balance out to the MEU, as you suggest — do you see in your plan that they would have to pay a portion of the debt that has been incurred by the province so they would be liable for some of this debt that may be associated with Ontario Hydro, or do you feel they should just pay the cost of generating the power?

**Mr Gillette:** I think that considering they are helping already by filling in the \$40 billion in future costs, asking them to absorb past debt they did not incur would frighten them away from the market quite quickly, whereas if this cost recovery is necessary, I would suggest it's better that it's on the actual transmission of the electricity to the customer rather than on the producer. That would be my suggestion.

**The Chair:** Thank you very much for your deputation, Mr Gillette, and for your written deputations as well. We appreciated that very much.

P.D. O'BRIEN

**The Chair:** Mr P.D. O'Brien, welcome to the committee. For the purposes of Hansard, if you would just identify yourself, then you have 20 minutes for your presentation and for questions and answers.

**Mr P.D. O'Brien:** I am a tradesman who worked for four years for Ontario Hydro. In that four years I couldn't point out deficiencies that a 12-year-old child would see — not nuclear deficiencies but trade deficiencies. One of the things I saw was several instances of deliberate industrial sabotage. One involved an entire unit of the Bruce A nuclear power plant.

Ontario Hydro ignored the fact that the spent-fuel bay was not available and they allowed the first reactor there, number 2, to go critical. I pointed out to my foreman that deficiencies which rendered the bay unserviceable were known and reported for approximately 12 months — I don't have the exact dates — prior to Ontario Hydro requiring the bay. What I had pointed out was ignored. Then I went through every government agency I can think of here and nobody did anything about it but Energy Probe. I guess Ontario Hydro had to acknowledge eventually that my allegations were true.

The importance of nuclear power nationally and internationally is so great that I cannot see at any time Canada not having nuclear power reactors operating somewhere. If you're going to have reactors operating, then you'd better have somebody who is knowledgeable questioning how they're operated. What I've put down there is self-explanatory. You people, not me, have got to get the answers. That's all. It's as simple as that.

**The Chair:** All right. Thank you very much.

**Mr O'Brien:** If you have any questions, if you would like me to clarify anything further, I will do so.

**Mr Laughren:** I don't know where to start.

**The Chair:** You have five minutes, Mr Laughren.

**Mr Laughren:** I'll wander around. You use the word "criminality" in your suggestions that members of the committee need to investigate. You talk about industrial sabotage and so forth. Are the powers that be in Ontario Hydro aware of this industrial sabotage?

**Mr O'Brien:** I should hope they are, but of course they've denied that it took place.

**Mr Laughren:** So how do you know they're aware?

**Mr O'Brien:** Because I have told them. I've given affidavits. I've gone through every route I can think of.

**Mr Laughren:** Is this sabotage internal or external?

**Mr O'Brien:** Internal.

**Mr Laughren:** So it's by people working at the nuclear sites?

**Mr O'Brien:** Very definitely. It's by the supervision, and how high up the supervision level it went I have no idea. I can only speak of the people I had firsthand dealings with.

**Mr Laughren:** What would be the motivation of that kind of sabotage?

**Mr O'Brien:** To create extra work and overtime. To discredit the private contractor that was involved.

**Mr Laughren:** It would be sort of like in northern Ontario when I was driving on a highway up to Timmins and I saw a huge number — as a matter of fact I found out later 1,500 guard-rail posts were knocked over by a private snowmobile that had been contracted out to the private sector, the road snow clearance, and 1,500 of them were knocked over and then of course would have to be replaced. Is that the kind of parallel to which you refer?

**Mr O'Brien:** That would be one instance, but can you say with assurance that it wasn't accidental?

**Mr Laughren:** No, I can't.

**Mr O'Brien:** Of course, 1,500, half a dozen or something —

**Mr Laughren:** I'm sceptical, but I can't prove it.

**Mr O'Brien:** That's the same thing. But Ontario Hydro could have proven it if they had spent one small fraction of the time they spent trying to rebut my allegations.

1630

**Mr Laughren:** All right.

**Mr O'Brien:** They don't want to acknowledge that it takes place.

**The Chair:** Thank you, Mr Laughren. That five minutes went by like the speed of light.

**Mr John O'Toole (Durham East):** Thank you very much for coming forward before the committee. Just to follow up on Mr Laughren's comments, you'd have a recorded event or incident which you have commented, I gather, with respect to suspected sabotage.

**Mr O'Brien:** I don't claim it's suspected. I claim it's 100%.

**Mr O'Toole:** You said you were with Ontario Hydro for four years. Were you an employee of Ontario Hydro or a subcontractor at that time?

**Mr O'Brien:** No, I was working for Ontario Hydro.

**Mr O'Toole:** What were the dates of that?

**Mr O'Brien:** It was 1973 to 1977.



**Mr O'Toole:** At that time, this was in the early phases of the Bruce stations?

**Mr O'Brien:** Yes.

**Mr O'Toole:** Who were the direct reports in site management at that time who you believe were aware of your concerns?

**Mr O'Brien:** G.E. Este was the site project manager and he wrote me a personal little letter, which unfortunately has gotten lost, which really was him imploring me not to proceed with this. I'm very sorry, but it was lost.

**Mr O'Toole:** That's unfortunate.

**Mr O'Brien:** It was on blank paper. It wasn't on Ontario Hydro —

**Mr O'Toole:** Not on letterhead. At that site it's my understanding that AECB have onsite personnel who are duly charged with the regulatory regime.

**Mr O'Brien:** First of all, I naturally went through Ontario Hydro. This is only the tip of an iceberg in terms of deficiencies, not major deficiencies but deficiencies that I was quite capable of seeing and saying that they were wrong and being correct in saying it, trade deficiencies.

**Mr O'Toole:** Did AECB respond formally or informally to any inquiry that you made of them?

**Mr O'Brien:** I would suggest, if you want to know precisely how they addressed that matter, that you ask them because they have the documentation. I don't have the documentation now.

**Mr O'Toole:** I might. For the purpose of the committee, if you could be more precise in the dates — you said around 1977. Was it July or was it —

**Mr O'Brien:** Excuse me, sir. I don't mean to be rude to you or anything. If this is a parliamentary committee, you only have to ask these people for the literature or the correspondence they addressed to me and get copies —

**Mr O'Toole:** So there would be a record of Mr O'Brien's correspondence with AECB?

**Mr O'Brien:** I should hope so.

**Mr O'Toole:** Okay. We'll get it.

**Mr O'Brien:** You could also ask, I believe, a Gerry Rothschild of Dominion Engineering in Lachine, Quebec, because I pointed out that Ontario Hydro spent months reworking mechanical units that they supplied, and I think that after Ontario Hydro had reworked them, they weren't any better, but I'm sure that Dominion Engineering up in Lachine, Quebec, were charged with them.

**Mr O'Toole:** If you don't mind, I'll just move into a little more personal area. You were with Hydro as an employee for four years?

**Mr O'Brien:** Yes.

**Mr O'Toole:** Why did you leave?

**Mr O'Brien:** I left because of these — I didn't really leave. I guess they laid me off. What happened was, after four years I got so exasperated that trivialities, things that should have been addressed when I brought them to the attention of my supervisors that weren't being addressed, that I sat down and started documenting them. I said, "If there is some reason that they're not addressed at Bruce, surely these people across the road should address them." They took great pleasure in seeming to deal in semantics

and making a liar out of me, like they didn't address the thing. They didn't address my problems if they could —

**Mr O'Toole:** In your view, are the plants safe?

**Mr O'Brien:** That's what you are to decide. You are digressing now. I don't think the design of Bruce A, Bruce B and Darlington makes sense in any way for the simple reason that they are not independent units such as Pickering here is. In my first hours of employment there I had an orientation walk-round because I worked in the central fuelling area, and there is a duct that goes right underneath these reactors that's wider than or as wide as this room and maybe 40 feet high. I said to my supervisor, "If you have a problem, how are you going to isolate the reactors?" He said, "We'll have no problems." I thought if you bought a Rolls-Royce or a Cadillac and somebody told you that you'll have no problems with it, you'd wonder about their intellect or what they thought of your intellect.

**Mr Kwinter:** Mr O'Brien, in your written questions to us — one of them I found interesting — you say, "Who on this legislative committee has seen the report on the lead blanket left in a reactor steam system at Bruce Nuclear facility?" I should tell you that we may not have seen the report, but I think everybody on this committee was made aware that it had happened, and the explanation was that it was human error. You imply that this is "criminality, sabotage," and I'm just wondering how you knew that was in fact the case.

**Mr O'Brien:** I don't know that is the fact, but if somebody left a lead blanket in the engine of your car when they were servicing, you'd wonder whether it was just by accident, especially if you knew you were going to pay the people who were servicing it to rework it. That is the situation with Ontario Hydro. The employees of Ontario Hydro know very well, whether they leave one lead blanket or two lead blankets in there, that the work is going to be rectified. So if you close your eyes to the fact that industrial sabotage takes place, then you're going to have more of these things.

**Mr Kwinter:** My last question, Mr O'Brien. I'm intrigued by a statement you made at the very end of your written notes, where you say we should "ensure that the same investigators are not members of the secret society of Freemasonry." What is behind that?

**Mr O'Brien:** My supervisor at Bruce was a Freemason and he told me, "If you want to do anything around here, you have to be in the Masons." Since he was able to organize the sabotage of the spent-fuel bay and have nothing of that matter be publicized, I believe there was merit to his claim. Furthermore the police officer in Kincardine, when I went with an affidavit on that — which is rather unusual. Normally they don't send police officers back to areas of their origin. It is considered internationally good policing not to send a police officer back to his origins. He was also a Freemason. I knew the man, I wouldn't say socially, but I knew him to speak to and knew who he was long prior to the fact that I went to him. He took the documentation that I brought to him, the affidavit. He took me into an inner office —

**The Chair:** Excuse me, Mr O'Brien. Can I break in just for a moment? I'm listening very carefully to the interchange here and I want to ensure that you understand that parliamentary privilege doesn't extend to witnesses. I'm sure Mr Kwinter understands, so I'd like you to be very conscious of any words you may use that might otherwise result in any kind of legal action beyond this committee. I just want to ensure, as I'm the Chairman of this committee, that you've been appropriately advised.

**Mr O'Brien:** I think if you're going to look at nuclear power as a source of energy, you'd better be prepared to put those things aside. I would think you people should consider that individuals coming before you are privileged, just as you are privileged within the Legislature, to speak facts whether they hurt somebody or not. May I continue now?

**The Chair:** You may indeed, Mr O'Brien.

**Mr O'Brien:** The man took the documentation that I brought there. He took me into an inner office. He studied it for one hour. He took no notes, asked no relevant questions and handed it back to me and said, "If that material was around here, somebody might see it." I went to the crown attorney in Walkerton and had been referred to him. He took no notes, asked no relevant questions, looked at the documentation for an hour.

**The Chair:** Mr O'Brien, I thank you very much for appearing before the committee. Thank you for your deputation.

1640

#### CANADIAN ENERGY EFFICIENCY ALLIANCE

**The Chair:** The next deputation, the Canadian Energy Efficiency Alliance, Bruce Lourie. Please, for the purposes of Hansard, if you'd be good enough to identify yourself and then proceed, we're in your hands for 20 minutes.

**Mr Bruce Lourie:** My name is Bruce Lourie. I'm the executive director of the Canadian Energy Efficiency Alliance. I'm not sure if my presentation is going to be as intriguing or exciting as the one that preceded me.

**Mr O'Toole:** They all are.

**Mr Galt:** You can try.

**Mr Lourie:** They all are.

Thank you very much for providing us with the opportunity to speak with you today. My comments are going to relate primarily within your terms of reference to item 2(b), the "economics and viability of alternative supply options," and item 2(c), a review of "environmental impacts of specific components of recovery" and recommend "means to address and mitigate these impacts."

I'll spend just a moment describing our organization. The Canadian Energy Efficiency Alliance is about to have our second annual meeting next week. We now have 33 members and those members include both of the major gas utilities as well as Ontario Hydro. We have financial institutions, energy service companies, manufacturers,

consumer groups, environmental groups, independent power producers, the Municipal Electric Association, private consultants and municipalities, so we're a very broad-based organization with the single goal of trying to advance energy conservation across Canada. Most of our work to date has been focused in Ontario.

I think it's somewhat significant that we've managed to bring together many of the organizations that have vested interests in the issue relating to the restructuring of Ontario Hydro and the nuclear power issues. One of my jobs is to try to get our group to agree to say things publicly together. Most of what we say is based on two primary principles: (1) We need a more energy-efficient economy to provide competitiveness for the province of Ontario and for our manufacturers; (2) We need to improve energy efficiency in our economy to protect the environment.

What's interesting is that Ontario Hydro clearly faces a significant challenge right now in terms of what to do with the supply situation. We like to see this challenge as an opportunity.

My comments really are based only on three points. Although I think the strategy after the previous speaker is to speak the whole time and not have as many questions, I'll just raise my three points right now.

The first point — I think this is often missed in the discussions, at least any of the discussions I've seen around Ontario Hydro — is that the people of Ontario, I believe, are willing to pay for a clean environment. I think they're actually willing to pay more for electricity than they currently pay to have a clean environment. I think the reason we don't get this message out clearly is that there is a considerable amount of pressure being applied by a very small number of large, industrial users who clearly want lower electricity rates.

Right now, if we compare our electricity rates to those of our neighbours and those of our primary competitors, we will find that our rates are probably lower than most of the manufacturing jurisdictions with which we compete. If you look at the individuals on the street, the small businesses, you'll find there is a willingness to have a slight increase in rates if that means a cleaner environment or a safer environment for us.

My second point is that in Ontario and across Canada we have a vibrant industry right now that focuses on providing energy conservation products, technology and services. In fact the industry that we have here in Ontario is regarded worldwide as being one of the leading in terms of expertise. We have significant opportunities to capitalize on the expertise we have in this province and to not lose it in terms of actions that may result in reducing opportunities for energy efficiency. That is an important consideration in the decisions we make.

My third point, then, focuses on the concept I mentioned earlier of seeing this challenge as an opportunity. What we need to consider, as we're looking at supply options for Ontario Hydro, is energy conservation essentially as a supply option. So rather than having to build new power plants or necessarily having to revitalize all of the nuclear power that's been shut down in Ontario, we



can actually make significant gains by saving energy in the province. I think we'll find that those savings which will take place over the long term will benefit consumers, small businesses and manufacturers in the province, and they'll certainly benefit the environment.

There are a few specific ideas I thought I would mention as well. I don't know if you are aware that Ontario Hydro is planning to issue a request for proposals for energy conservation. We provided some assistance to them. My understanding is that should be coming out in a couple of weeks.

One of the key issues with energy conservation is whether it's a utility perspective or the perspective of a government. There needs to be a long-term commitment to energy conservation and I'd like to think that those kinds of long-term considerations are made as the committee is dealing with this difficult subject.

There's a concept as well called stranded benefits and it's the opposite of stranded assets. What stranded benefits refer to is that in a utility system there are opportunities to save energy that will be within the larger benefit of the utility and of the customers. As you break up a utility into separate components, those benefits get lost because each individual component is just seeking to maximize its own profits.

What we have found and what we've come up with in our alliance, as a position we are advocating in this forum and will be in others, relating to restructuring, is that the province should be looking at some mechanism for regulated energy efficiency. It's important to remember who our members are: the large utilities, financial institutions and manufacturers in the province that are saying that they all want to see regulated energy efficiency in the province. The reason they want it regulated is because regulations provide a level playing field.

Perhaps I'll just read out from our organization what our position is. I'll provide this information to the committee in writing, not immediately following but within a short number of days. Our position is:

That the Canadian Energy Efficiency Alliance supports the establishment of a regulated mechanism to ensure that funds are available for energy efficiency, that the regulated mechanism be applied in a non-discriminatory fashion with regard to fuel type and that the regulated mechanism include comparable principles and requirements for the gas and electricity industries.

Perhaps some of those things relate more specifically to the bigger context of electricity restructuring, but I think it's hard to disentangle those given the job of your committee.

Those are my prepared comments.

1650

**Mr Galt:** You may be right. People may be willing to pay more for their electricity for a cleaner environment, at least in their home, but I've been told by the Ford Motor Co that from 1985 to 1995 they went from having the cheapest of the 17 regions where they produce cars to the 13th most expensive. When it comes to making cars or whatever widgets you want to make, it's the bottom line.

If they're going to pay more for electricity, we may not have those plants here. It's a concern we have to have. That's bottom line.

You talked a lot about energy efficiency, and certainly the Ministry of Energy has a lot of regulations on that for various appliances. I'm curious, how do we compare with other countries in the world in the efficiencies of lighting, appliances etc? Do you have a position for us?

**Mr Lourie:** I can give it a shot. I think Ontario fares reasonably well within North America, although if you look at Europe, and particularly northern Europe, it's very easy to see there are huge opportunities we don't take advantage of in terms of energy efficiency potential. I gave a presentation earlier this week, and the opportunities — depending on the product or sector, we could probably be using between 10% less for certain applications and up to 80% less for things like lighting. So we have huge opportunities and huge gains to make. The reason Europeans tend to be more efficient is because they have higher electricity rates.

Just getting back to your point on the Ford Motor Co, my point is there are several large manufacturers in the province that clearly want to see lower electricity rates, and I think that's a consideration, but I don't think that necessarily is at the expense of the 10 million residents of Ontario.

**Mr Galt:** When you talk about 80% efficiency improvement in lighting, are you taking our worst lighting here, the incandescent bulb, to something they're using, or what our average is here to what they're using?

**Mr Lourie:** If you took a standard lightbulb that's used in a building, like a long, fluorescent tube, say, in a commercial building or an office tower, you can purchase lights that are anywhere from 50% to 80% more efficient than those bulbs. They're on the market and they're cost-effective. They pay off in a very short period of time, in a year to two years.

**Mr Galt:** And the cost difference in original purchase?

**Mr Lourie:** They are slightly more expensive, but that increased price pays itself off within a year to two years.

**Mr Kwinter:** Mr Lourie, I commend your organization for what they're trying to do. There's no question that a kilowatt saved is just as valuable as a kilowatt generated. That's good economics. Have you done any studies as to what savings are potentially available in the use of electricity by using these conservation methods?

**Mr Lourie:** Personally we haven't undertaken those studies but they have been undertaken by others. It's not easy to answer that in one simple answer, but if you break it up by sectors and products, within the residential sector, say, there are fridges that typically would use 50% of the electricity of the average fridge sold, and those are on the market today. We tend to have a large number of products — as I said, lighting — that are anywhere from 50% to 80% more efficient, in the marketplace. I would say overall we could be using, within a fairly short period of time, 20% to 30% less electricity than we currently use. We could even do that — just one study I was involved in —

simply through improving the energy efficiency standards and codes that we have.

It may be worth mentioning as well that we worked very hard for the past year and a half trying to prevent the Ministry of Housing here from reducing insulation levels within new homes in Ontario by 30%. It's actions like those, where clearly it saves people money and improves the quality of the housing stock and it's in everyone's best interests. We believe those kinds of things, those standards need to be increased, not decreased as was being proposed by the Ministry of Housing.

**Mr Kwinter:** In any of your studies, have you looked at price as a conservation tool? For example, you already mentioned that in Europe, because of the high cost, it limits the use. I know in Florida they don't sell electric kettles because electric power is so expensive there that nobody will buy them. It's possible you could actually get the price to go up, which would force people to conserve. Their overall bill over the year might be the same, but the savings would be offset by the fact that they would be more conscious of their electrical costs.

**Mr Lourie:** There have been many studies that indicate that's the case. That's right.

**Mr Laughren:** I want to pursue something I think Mr Galt started, the whole question of people being willing to pay for a cleaner environment through their hydro rates. Is there evidence of that? Has there been polling done that shows that?

**Mr Lourie:** Yes. Ontario Hydro actually has done that.

**Mr Laughren:** Whenever we talk about hydro rates going up here, it becomes a big political issue. You've heard already that the previous government had said they were freezing rates; the present government says they are freezing rates. Hydro says, "Wait a minute, we're going to talk about increasing rates." I think Hydro increasing rates is going to be dealt with at their next board meeting. I think the minister, just yesterday or today, I'm not sure when, said, "No, no, they're not going to increase rates," even though the minister doesn't have the authority to say no unless they issue what I think is called a government directive that says they can't do that. It's a strange world out there if people would be willing to pay more and Hydro wants to charge more, but the government won't let them. What's going on is a bit weird. I wondered if you saw any way through this series of contradictions.

**Mr Lourie:** It's difficult because there's a lot of conflicting information out there. On the point about Ford saying where we sit on the scale, I think if you look at most of the jurisdictions we would like to compare ourselves with, like New York state or Illinois or Michigan, we would find that our rates are actually lower. If we look at states like Tennessee and Mississippi, where typically they don't have standards for many things, you probably would find that their rates are lower. I think if we look at comparable jurisdictions in terms of the kinds of standards we accept for ourselves, you would find that our rates are lower than those of many of our competing jurisdictions.

I know Ontario Hydro has undertaken polls. I guess my point was that there's a big difference between asking Ford, Falconbridge, GM or Inco whether they would want rate increases or whether they would they'd be willing to pay for them for a cleaner environment, versus asking one of the 10 million residents of Ontario whether they're willing. I expect you would find more receptivity among the general population.

**Mr Laughren:** When you talked about regulating energy efficiency, you said in order to create a level playing field, and I couldn't help but wonder with whom.

**Mr Lourie:** One of the issues we have within our organization is the gas industry versus the electricity industry. Presently the gas industry has regulated energy conservation through the Ontario Energy Board. There is no such regulation for Ontario Hydro, as you know. So on any kind of regulation that would be applied to Ontario Hydro for electricity, the gas and electricity industries would like to see a similar kind of mechanism. Just generally it would set out rules and principles that whether you're an energy service company or a consultant, everyone would understand what those rules are and be able to apply equally across the board.

**The Chair:** Mr Lourie, perhaps you could just indulge me for a moment with a response to a couple of questions in terms of some of the conservation approaches we're taking. You referred earlier, for example, to lightbulbs. I must confess that I went to a local hardware store not long ago looking at some of the new energy-efficient bulbs and I have to tell you that I was stunned by the price. In your comment to this committee, you indicated the cost differential is offset by the energy savings within a year or so. I have to tell you that my rough figuring, and I don't profess to be an Einstein, played out well in excess of 10 years and beyond when I did the figuring, and it took me quite by surprise. I wonder if you care to respond to that.

**Mr Lourie:** My reference to one to two years was for commercial lighting in commercial office buildings. For residential lights, it would probably be more like a seven- to 10-year payback.

**The Chair:** My figuring wasn't too far off, then.

**Mr Lourie:** You're correct.

**The Chair:** In terms of energy efficiencies where you're trying to encourage retrofitting of existing residential housing stock, to your knowledge, at this point are there any utilities or any agencies that are offering any kind of economic incentives?

**Mr Lourie:** For residential retrofit?

**The Chair:** Yes. Let's suggest even window replacement, for example.

**Mr Lourie:** Anywhere or just in Ontario?

**The Chair:** I'd prefer to stay in Ontario, although I'm happy to deal with other provinces.

**Mr Lourie:** I think the gas utilities have programs where they will go in and wrap hot water pipes, for example, or put blankets around hot water heaters, things like that. There aren't incentive programs per se where you get so much money if you purchase such and such a product.



**The Chair:** Mr Lourie, thank you very much for attending upon the committee. We appreciate your evidence.

1700

#### EPV CANADA CONSULTANCIES

**The Chair:** The next witness is EPV Canada Consultancies Ltd. Would you be good enough to come forward and, for the purposes of Hansard, identify yourself when you're ready to start.

**Mr Laszlo Jarmai:** My name is Laszlo Jarmai. I'm president and CEO of EPV Canada Consultancies Ltd. EPV stands for energy photovoltaics and we are into solar power.

Before I get down to the written presentation, I have received an addition of five minutes, so I thought I would say a few words about why this presentation is really being made.

Until the Ontario Hydro — I call it a nuclear anomaly — happened in July, I was the principal proponent of not using solar power anywhere where there is a central energy supply grid, which includes of course most of Ontario. Actually, that's the only invention of my own that I claim, the economic principle for economic solar power.

What EPV Canada is all about is economic solar power, and the key word is "economic." We are not really interested in everything that has to be subsidized in any shape or form by anyone.

It was actually after the Ontario Hydro nuclear anomaly happened that some of my friends who knew what we are doing in countries where there are insulation figures of about 2,000 sunshine-hours per annum, which is where this should be done, started knocking on our doors to see what could be done here in Ontario. So everything I am saying here, please take it with that in mind.

We are happy to do anything we can do. I think we have a fantastic opportunity, but Ontario is not a primary market for solar power; neither is the United States, by the way, and neither is western Europe where most of the manufacturing is taking place.

Let me read my statement to you very briefly and then I am going to make a few more comments.

Thank you for the opportunity you have provided for me to make this representation to you. First of all, I should like to provide you with some information about myself, what I am and also what I am not. I hope this information will assist you in the evaluation of my representation.

I am a water resources development, that is, hydro, engineer, with more than 40 years of international experience that has been gained on four continents. During some of this time I had been a senior officer of UNDP, the United Nations Development Program. At present, I am president and CEO of EPV Canada Consultancies Ltd, an Ontario corporation that signed a major joint venture agreement on the establishment of a 25 megawatt per annum solar power generating facility in the Philippines during the Team Canada 1997 trade mission to Asia led by the Right Honourable Jean Chrétien, Prime Minister of

Canada, and accompanied by all 10 provincial premiers, among them the Honourable Mike Harris, MPP, Premier of Ontario. That's what I am.

What am I not? I am not a nuclear engineer, neither am I a nuclear scientist. As a result I do not intend to have this representation interpreted as an expert testimony on Ontario Hydro's nuclear affairs. I am not some kind of solar zealot either who would try to use the platform of these hearings to suggest replacing nuclear power in Ontario with non-conventional energy sources, at least not in the foreseeable future.

What I am, first and foremost, is a reasonably experienced Ontario taxpayer who feels very uncomfortable with the estimates of \$5 billion, \$8 billion or \$12 billion that we are supposed to fund as a province just to restore a rather iffy nuclear status quo in Ontario, as has been reported widely by the media. I believe that before we spend such an enormous amount, we should all look around at whether some of these amounts could not be spent on something much more progressive which could provide us Ontarians with an investment towards the future.

One of these potential progressive investments would be in the area of solar power development, and this is what this representation is all about. I firmly believe that for a small fraction of the billions mentioned above, we could establish for Ontario a global lead role in that field in a relatively short period of time, using resources that are already available to us or easily accessible.

The most important such resource that is easily accessible to us is the state-of-the-art solar technology of EPV Inc, our sister company in Princeton, New Jersey, USA, and its Canadian owner-president, Dr Zoltan J. Kiss. After several decades of research and full-sized field trials, EPV's solar technology has been acknowledged as the best and most economical such technology available by no less an authority than Mr Federico Peña, Secretary of Energy for the Department of Energy of the United States government, in a press release dated May 14, 1997, a copy of which you will find attached to this representation. That's the last page in the material I handed out.

I am pleased and proud to inform you that EPV's solar technology, which is celebrated by the DOE in the attached press release, is the same technology that we, EPV Canada, will be using in the joint venture project in the Philippines that I have referred to on the previous page. This technology could be made available to us here in Ontario relatively easily and it is this availability that this representation is based upon.

I recommend to this select committee, and through it to the government of Ontario, to use this technology as the basis of a proposed solar industry in our province. This industry in turn could achieve the global lead role that I have referred to before, embarking on an enterprise that would put us to the cutting edge of solar power development on earth and would preassign us a prominent place in the solar millennium that follows.

The framework of this representation and the time limits imposed on it would not allow the introduction of the

details of a proposed *modus operandi*, how this could be achieved. I am, however, prepared, indeed very much interested, in the provision of such details if called upon to do so.

In closing, I would like to direct your attention to an article of mine written on July 14, 1997, which is also attached to the material that you have, with the title *Towards a Solar Millennium*. The contents of the article explain themselves, more or less, but I would be delighted to answer any further queries if called upon.

I should like to end this representation with a quote by Dale Carnegie, the author of *How to Win Friends and Influence People*: "If you have a lemon, make lemonade."

I should like to add a few explanatory notes to the last page, to the Department of Energy press release of the United States of America. If you look at that text, it will show you that to establish a solar power industry anywhere is not easy. If you look at the dates in that press release, it says in the second paragraph, "DOE has been performing cost-shared research on thin films with EPV and its predecessor company since 1978," which means the Department of Energy had been the partner of our sister company for 19 years before this press release came out.

If you look at the extended business card of mine, which is on the third page, it shows you a picture of a solar-powered generating plant in Birmingham, Alabama, which was built in 1985 and partially funded by the same Department of Energy.

The question is, why did this press release not come out either in 1978 or at least in 1985? Without being too long about it, it's because there was too much resistance against solar power, and if you look around the world, there is still too much resistance against solar power, for one reason: People have the impression that it is not economical. This is not true. If you select the right circumstances, solar power can be very much economical.

Here in Ontario there are not too many of those circumstances that are available to us, but there are some. I'm going to mention to you right here a very worthwhile program of Toronto Hydro. It was announced in the media on July 10, 1997, that they have started a pilot program where they would provide an interested customer — industry, condominium, whoever — with a reversible meter. If they installed the solar modules at their own expense, they would really buy their power, what they produced in excess.

If you are looking at it, and this is something I don't have to tell you because you probably know already, the only reason this program didn't take off yet, because there are many interested people, is because they could not get a solar module at a decent price. That's what we're coming down to. Until we have to import solar modules from the United States, they are simply too expensive. You could buy them if you go to Canadian Tire. They say you can order them in advance and in two weeks they would deliver them to you at the price of \$22 per watt. EPV Inc is producing them in Princeton, New Jersey, right now for under \$2.50. What the spec says is that by 2002 they are

going to do it under \$3 per watt. This is incorrect; we are doing it right now for under \$2.50.

We are talking about a tenfold price increase that the various middlemen have put on top of it by the time it gets to the consumer. The selection that I hope this committee will make, and by suggestion the Ontario government will make, is to have a solar module manufacturing capability right here, preferably in Toronto, but somewhere in Ontario. That's all I wanted to add.

1710

**The Chair:** Thank you, Mr Jarmai. We appreciate that very much. There's time for one question from each caucus, beginning with Mr Kwinter.

**Mr Kwinter:** Just so I'm clear, when you started you said you didn't think that solar panels are really very practical in Canada, the United States and Europe. Are you advocating that we should set up an industry so we can provide solar panels to the rest of the world where it does make sense?

**Mr Jarmai:** In about 65% of the world, it does make a lot of sense. There are only two figures that you have to take into consideration when you want to put some kind of economic handle on solar power. One is the figure of installation. That is the number of annual sunshine hours which any geographic location has. If a location has more than 2,000 sunshine hours per annum, which means an installation figure of 2,000, that place is eminently suitable for the use of solar power, whatever the other sources of power supply might be. We have here something like 1,400 to 1,500, so for that reason alone we don't qualify.

But there is a second consideration, that if you don't have a central power supply grid — solar power can be economical today here in Ontario, in cottage country, for instance. It's obvious that the moment you don't have to compete with the Ontario Hydro grid, you are economical today, if you can produce and provide the solar modules at a decent price. Under "decent price," I'm actually saying \$2.50, which means something like C\$3.50, per watt. A solar module represents a certain number of watts. In the United States they do it in sizes of 40 watts per module. In Europe we have gone over to 50 watts because of the metric system. I like to go metric because it makes more sense.

If you are looking at the perfect price you can get a solar module for from the manufacturer — this is the dollar-per-watt figure, the second figure you have to look at — you can get it from EPV Inc in Princeton, New Jersey, at US\$2.50 per watt, at the factory. Anything else on top of it is profit made by somebody. The \$2.50 figure already includes one third profit for the manufacturer, so that doesn't count.

If we could produce this here, and I'm sure we could — the inventor, the owner of EPV Inc, is as Canadian as we are. He got his doctorate here at the University of Toronto, except what happened to him — he's a friend of mine — is that he was grabbed by RCA right after he got his doctorate and they took him down to Princeton and they put him to work on the NASA space program. He has been doing it there ever since. His mother still lives here, north



of St Clair, and he still comes home and travels on a Canadian passport. He never became a US citizen.

This could be done relatively easily. Let me put a dollar figure on it, and please compare that with the \$5 billion, \$8 billion or \$12 billion: We are talking about US\$10 million for which we could establish it.

**Mr Laughren:** You'll have to bear with me. I'm just a county boy from the north and I think I'm missing something here. The solar panel is not linked at all to the Ontario Hydro grid, right?

**Mr Jarmai:** No. It doesn't have to be.

**Mr Laughren:** It's standalone, and somebody who is building a cottage in the wilds of Muskoka — as though there were any wilds up there any more — could use solar panels because it's only for summertime use, right?

**Mr Jarmai:** Exactly.

**Mr Laughren:** What I want to know is, what the hell is wrong with the private sector? Why aren't they doing this?

**Mr Jarmai:** I don't know. I have no real handle on this.

**Mr Laughren:** You don't know? But you're not a country boy from the north.

**Mr Jarmai:** No, I'm a field engineer. I may not look it, but I spent 40 years in the field and I was a project manager for various technical assistance agencies, including the United Nations.

I am absolutely on your side on this. I don't know why. The only reason I could think of is that solar power anywhere in the world is either handled by governments or by huge, and I mean huge, private enterprises. In the United States our principal competitor is Enron. In Germany it's Siemens.

**Mr Laughren:** But that's not government.

**Mr Jarmai:** No, but let me take one example, Enron. Enron was all out to buy EPV Inc for one purpose only, to kill it, because it hurt their other energy supply products. Zoltan, who happens to be my good friend, told me they had a due diligence exercise at his plant for a year and finally he had to throw them out because they were not interested in doing anything with him. They just wanted to find out what he's all about. It is not easy.

**Mrs Johns:** I just wanted to thank you for this interesting tidbit that I can take home to my young boys, that the robot that's on Mars is solar-generated. I didn't know that. That's pretty interesting, and we'll certainly use that.

I need to get to the bottom line of cost here. You're telling me it costs \$2.50 per watt to make this panel. You're telling me it would cost \$10 million to start the manufacturing here. What is the bottom line to the person who puts that in, compared to the hydro rate of about five cents per kilowatt-hour? Compare them for me.

**Mr Jarmai:** With a hydro rate of five cents per kilowatt-hour, we are not competitive. It's as simple as that. That's why I have — this is the only thing I've invented in this whole thing — the guiding principle for economic solar power. I invented it long before the Ontario Hydro anomaly started. At that time, if you had asked me the same question, I would have said, "Let's forget Ontario."

The only reason I'm here now and talking to a lot of people in Ontario is because there is a possibility of doing something here. In addition to that possibility which we would be doing here in Ontario proper, we would be able to base a whole export-oriented industry — and this is where I'm answering Mr Kwinter at the same time. We have a huge potential market in the world where solar power is economical today.

**Mrs Johns:** But at 1,400 or 1,500 hours of sun supply, we couldn't actually produce enough solar power to keep us in electricity during the year, so we would have to have a last resort, which would be hydro and the wires and all those things we have now, so there would be no cost saving.

**Mr Jarmai:** Let me turn this around. We would be complementary to hydro, not hydro to us. The Toronto Hydro initiative I mentioned is supposed to do exactly that. I should have brought a copy of that article with me from the July 10 number of the Toronto Star.

There is this house at the bridge at Richmond that is pioneering in many respects, but also regarding solar. That's where they started it. They are installing a number of solar modules and they get from Hydro a reversible meter. It meters their use and it meters when they don't use the power and they feed it back into the grid. In cottage country this could be quite substantial, where somebody is using that cottage two, maybe three months a year at the most, and the sun shines for 12. If we do install this kind of reversible meter, that's because the module is going to produce electricity whether somebody is there or not.

**1720**

My daughter has been working in Japan for the last eight years and we keep visiting her. The Japanese government is spending an enormous amount of money because they don't have any oil. Every little Japanese household that is interested can get a subsidy from the government to put it on their roof. If you ride through areas in Japan, they have a program which does 70,000 roofs per annum. It's enormous. It's the largest such program in the world, unless Bill Clinton manages to get 10 million roofs in the US, but he is very much at the beginning of it.

This is something we can do if we have a decent supply of modules here in Ontario. Without that, it definitely won't work, because the middlemen are going to buy it.

Let me give you one more example, in the Philippines. We are doing a concept called MIPPP, manufacturing integrated photovoltaic power project. What that project is going to do — the power station is going to own the solar module manufacturing facility. We are installing a manufacturing facility first, and then for five years that manufacturing facility will do nothing else but produce modules for the power station. So we eliminate the middleman on both sides. That's the way to make it economical.

**The Chair:** Thank you very much, Mr Jarmai. We appreciate your attendance upon the committee.

Just before I go to our next witness, the Chair has just learned of the death of one of Mrs Fisher's in-laws. I

know the committee would want me to express our condolences to you and your husband, Mrs Fisher.

### SAC INTERNATIONAL

**The Chair:** Is Mr Ahmad Solomah here? Please come forward.

**Dr Ahmad Solomah:** My name is Ahmad Solomah. I am the president and CEO of SAC International, a company in Mississauga. My PhD in nuclear engineering, from North Carolina State University in 1980, primarily dealing with radiation and radioactive waste, has been widely recognized by DOE in 1978-82. I won several prizes for my work in North Carolina. I have been working with nuclear waste and nuclear issues since 1974, so I have about 23 years of experience in this field. I was a guest scientist with the KFA nuclear research centre in Juelich with Professor Merz, who was the chairman of nuclear safety of Germany, I worked with Atomic Energy of Canada and I worked with North Carolina State University. I am politically active. I was the PC candidate for Mississauga Centre in the June 1977 federal election.

I wrote a letter to Mr Shea about four weeks ago, after the problems of Ontario Hydro. Based on my experience in many countries, I gave him my recommendation: that this government should establish an authority under the name of Radiation Protection Authority. When I talked to Mr Sterling a year ago regarding low-level waste, which was and is still a big problem here in the province, he sent me back a letter saying he had no interest in making a legislative body to control radioactive waste. But as long as this government doesn't have the upper hand in Ontario Hydro, we will have a lot of problems.

I will give a German example. The German nuclear program is one of the best in the world by any standard you may look at, better than the Americans', as a matter of fact. During Three Mile Island, the people who solved the problem were Germans. I'm telling you this based on my experience. It was a fresh reactor, 50 days operating the reactor by the General Public Utility in Harrisburg. The meltdown occurred in about 29% of the core and they couldn't dismantle it. They had to get German expertise. Once you shake some shape that you don't know, you can achieve criticality and an explosion will take place. They had to get experience from Germany.

The German program also solved Chernobyl, because the German program has the most extensive experience in graphite reactors. The graphite reactor in Chernobyl was burning at about 1,800 degrees Celsius and nobody knew what was going on. The Germans solved the problem.

The German program for waste management and for nuclear energy is a complementary program between the federal government in Bonn and each province. I have an example with Lower Saxony, where the low-level waste site has been decided on. The Lower Saxony environmental office was in charge and is still in charge. In Bavaria, when they made their plant it was decommissioned after they built it. They never ran it by the ministry

of the environment of Bavaria. The ministry of the environment of any province should have the upper hand.

Here I wrote down the functions of that office:

Monitoring and controlling the environmental radiation of nuclear power and any other nuclear facility, whether it is manufacturing of uranium oxide or decommissioning or decontamination. The province should have the upper hand in monitoring and controlling this, not the producer. You cannot accuse the producer and make him the plaintiff at the same time. They must be accountable to some body of the government.

The same office should be responsible for issuing the licence under AECB, because AECB has the mandate from the federal government. The provincial government should have an office to work with the federal government to implement the AECB act.

The other one has been ignored even by the report of Carl Andognini; I didn't find anything in it about decommissioning. He talks about recovery of the assets of Ontario Hydro. How about after 20 years? What will happen to those reactors? You have to retire them.

I will show you the data from the states involved with nuclear. North Carolina's low-level waste management program: They spent over US\$110 million and they couldn't get a licence for a disposal site outside of Raleigh because the office of radiation protection in Raleigh demands too much information from the contractors.

### 1730

Look at the white bars. The white bars are the amount of waste coming from operation. The first reactor to be decommissioned in the United States will be in the year 2015. The decommissioned volume will go very high, from almost 60,000 cubic metres to — let me focus this; it's fuzzy. By the year 2030, almost all nuclear energy will be phased out in the United States. North Carolina had a plan in 1978 to build four units, 900 megawatts, Westinghouse reactors. They were successful to build only one, because the public were against it. By the year 2030, all the operating reactors in the United States will be phased out and you will end up with a huge volume of waste. Ignore the high-level waste which comes from the core and we expect that by the year 2030 in the United States there will be over 300,000 metric tons of heavy metals, just uranium, uranium oxide.

This flow chart shows you what the radiation protection authority will do. Working with AECB, it will issue licences for operation, for decommissioning and for the storage and disposal. This should be under the Ontario Ministry of Environment.

I will show you how we can tackle Ontario Hydro. As far as I'm concerned Ontario Hydro has no control from outside, AECB or any other agency, because the government of Ontario doesn't have authority to do anything, just watch and wait, and then we have problems and we talk about it.

This will be the RPA, under the Ministry of Environment, this is AECB, this is Ontario Hydro Nuclear, this is Ontario, any other nuclear facility, like Port Hope, which



is a big problem, with the cooperation of Environment Canada and any other agencies.

I would like to leave the floor now and you can ask whatever you want to talk about.

**The Chair:** Thank you. We'll begin the questions with Mr Laughren. You have about four minutes each.

**Mr Laughren:** Thank you. You will forgive me if I have some problems with your recommendation, for a couple of reasons. First, I can recall when the province of Ontario was responsible for safety, including radiation, in our uranium mines, and the bodies were stacked up — stacked up — and the counting was being done before the Ontario ministry ever lifted a finger to do a thing about it. That's when the Ham commission was appointed. It was disgusting. It was criminal. Between the Ontario government and the uranium mining industry, there should have been people go to jail, but there weren't. All that happened was that people died. So I'm not convinced at this point in time that the Ontario government, given the way the Ministry of Environment has been gutted in the province in the last two years —

**Mr Galt:** Oh, get a life.

**Mr Laughren:** What do you mean, get a life? I'll have my piece, if you don't mind.

It has been gutted, and I'm really worried that if we say to the Ministry of Environment, given the climate in Ontario today, that they're responsible for radiation in our plants, nothing will happen. I would much rather leave it with the AECB, and I'm not that happy with AECB either. I'm wondering why it is that you think AECB cannot do the job and the Ministry of Environment would do a better job.

**Dr Solomah:** I'll tell you why. Any nuclear facility has some data collection, the good data and the bad data, doesn't it? I'm a scientist. The good data will be published for AECB to renew the licence. The bad data, nobody will hear about it. I know this for a fact. I did some work for Ontario Hydro in the 1980s regarding plutonium processing in their Candu reactors. I worked for AECL. I worked for many government agencies. I know how the data are manipulated.

If Environment Ontario has some people at the site getting the raw data, right away, with AECB, they can put the decision together. But as long as you leave it to the people at Ontario Hydro to renew their licence, the good data will go to AECB, AECB will issue the renewal and we get stuck. And wait 20 years; you will see the problem of decommissioning. The decommissioning problem will be very expensive for every unit which is operating right now.

**Mr Laughren:** I respect your right to have your opinion.

**Mr O'Toole:** I just wanted to follow up on your comment with respect to what is actually the case today. We had a very important presentation by Dr Nolan from the Canadian Institute for Radiation Safety, and he came up with a couple of — “no one there to crack the whip,” is the reference he used. Really, he came down pretty hard on AECB.

I personally have some difficulty with the government, on its own, taking that kind of authority. I believe in the arm's-length regulatory process. What should that process be if it isn't the Ministry of Environment? The AECB, according to Mr Nolan — he was clear. He said the AECB is supposed to be looking after nuclear safety. Who has the whip?

**Dr Solomah:** Oh, no. AECB is not looking after the safety. AECB is looking after the licence for operation.

**Mr O'Toole:** Nuclear safety.

**Dr Solomah:** No, there is no such thing. The United States has NRC, the Nuclear Regulatory Commission. It's a more comprehensive body than the AECB because they have people at every nuclear reactor.

**Mr O'Toole:** So does AECB.

**Dr Solomah:** Well, did AECB do anything about picking till everything cracked down?

**Mr O'Toole:** Well, they're there. Their onsite people have been at every site we've been at.

**Dr Solomah:** This is the province. But in the States — I know Brunswick. I did some work for Carolina Power and Light, while I was working with North Carolina. They shut down Brunswick within 24 hours, because the NRC was in control. AECB, as far as I'm concerned, doesn't have the authority the NRC does in the United States. I would like to see a body here under the government of Ontario in control of these reactors, with AECB, to protect the environment of Ontario. This is the prime concern.

**Mrs Fisher:** Just a quick question. We'll leave your suggestions, I'm sure, for further discussion, but with regard to the public hearing process that took place over the past winter across Canada on high-level waste storage, which we have to look at in terms of decommissioning and long-term costs, do you or don't you support the proposal with regard to deep ground storage in the Canadian Shield of high-level, long-term-storage waste?

**Dr Solomah:** I do, because I did a lot of work for AECL on this problem. I support it.

**Mrs Fisher:** Do you think AECL has AECB support on that?

**Dr Solomah:** It has, but it comes again to the province, where you will bury that waste. You can't leave AECL and AECB, Ontario Hydro, alone.

**Mrs Fisher:** How do you separate the issue of the Power Corporation Act, where no power belongs to the provincial government — except for indebtedness, it seems; that's the only time you get to stick your nose in and say, “Hang on here.” How do you see the Ministry of Environment being able to have any more authority than what the Power Corporation Act does over Ontario Hydro today?

**Dr Solomah:** With AECB. The Ministry of Environment will work with AECB.

**Mrs Fisher:** Then maybe it should be the AECB.

**Mr Kwinter:** I just want to pick up on what my colleague Mr Laughren had to say. I'm having difficulty with your proposition that this should be a provincial jurisdiction.

**Dr Solomah:** Not alone; with AECB.

**Mr Kwinter:** What I'm saying is that it would seem to me that the major issues confronted with nuclear waste are global. They really are global, because the problem doesn't recognize provincial boundaries. If there is a problem, it expands all over the place. It would seem to me that you would compound the problem by putting someone between the operator, in this case Ontario Hydro Nuclear, and the Atomic Energy Control Board.

I would think that a better solution, if you're not satisfied with what AECB is doing, is to strengthen their regulatory ability to make sure they have the power to do the things you think they can't do and that only a provincial agency can do, so we have uniformity, not only uniformity in Canada but uniformity globally so we can use the collective experience and knowledge of everybody who's in the nuclear business to make sure we address this problem that everybody acknowledges is going to be a serious problem in the future.

**Dr Solomah:** I disagree with you for one reason: Somewhere, this reactor should be built, somewhere, and that "where" is the government; local government should have the upper hand on the decision.

In Sweden, they shut down reactors because of referendums, in one area. The same in Germany. Out of 22 reactors, I think they have only 10 right now because the local government said: "No, we don't need nuclear energy. There are too many hazards from these reactors."

A plant in Wackersdorf in Bavaria was shut down even before it started after completion. A reactor in North Rhine-Wesphalia was shut down after they spent 6 billion marks. The local government has the authority, in accordance with the federal. We should say: "These are the rules. If you like it, fine; if you don't like it, make a referendum." The referendum will go.

But we don't like to see Ontario Hydro and the AECL in control of these nuclear issues. You, as legislators here in this building, should have the upper hand and say: "This is my province, this is my environment. I am responsible for its protection."

**Mr Kwinter:** The local government has the ability to not fund it. If they don't fund it, it doesn't get built. The federal government is not going to build it; all they're going to do is regulate it. It seems to me that if you have a problem with the regulator, we should address that problem, as opposed to setting up another regulatory body that's going to be a patchwork. You're going to have one in Ontario, you're going to have one anywhere else that there are nuclear reactors, and you're going to have the Atomic Energy Control Board regulating them, when it would seem to me that a more efficient way of getting uniformity of standards would be to have the AECB do it all.

**Dr Solomah:** Everybody knows the laws for disposing. We know the limits, the high, the doses calculated from the processing side, from operating the power plant, but we need the local government to have the final decision. This is my advocacy for this committee.

**The Chair:** Mr Solomah, thank you very much. We appreciate your deputation and the submission of your information for the committee.

We have exhausted the deputations for the moment. The committee will take a recess and will return. We'll adjourn until 7 pm this evening.

*The committee recessed from 1744 to 1859.*

**The Chair:** The committee is in formal session. To remind members of the agenda, tomorrow morning at 9 am we have the continuation of briefing by Ontario Hydro. You may recall that Patrick O'Neil was giving evidence; we will continue and complete the deposition tomorrow. I think Ms Ng is also up. She was the next one. She was part 3, actually, to begin.

In the afternoon, the deputations will include the township of Bruce, and then Ernst and Young. I would ask that members bring their Ernst and Young report. I think that will be very helpful.

On Wednesday, we will adjourn to Pickering for the visitation to the site and then for the public hearings. The public hearing will be held at St George's Anglican Church, and we'll give you the information of where that's located.

**Mr Galt:** Will you provide a few words for us in the appropriate spot?

**The Chair:** We may need it by that time. If you and Mr Laughren continue your exchanges, we will do that.

Then we will adjourn, the next day, to Darlington for our site visit there. That's this week's task before us.

This evening, we have another deputation from Trans-Alta. Then the committee will go in camera for closed briefings. Those briefings will deal with the issues of beginning to assemble much of the information we've dealt with already, how we propose to deal with it, other areas we wish to explore. We need to have at least a couple of hours of some work in that regard.

You will also have tabled before you a letter that was sent to me on Friday of last week by the chairman of Ontario Hydro. So you know what happened as a result of that, the follow-up discussions from Ontario Hydro asked for an appearance before this committee as early this week as possible. They were then contacted and advised that we would be able to find some time today, but we could find significant portions of time tomorrow. We were advised that on neither of those occasions was the chairman available. So the time remaining for this week — as you know, I've just gone through our agenda — is simply not available for Mr Farlinger to come before us this week. In light of next week, it will now likely have to be the week of the 24th before we'll be able to see Mr Farlinger.

**Mr Laughren:** I think you meant the 17th, didn't you?

**The Chair:** No, I meant the 24th. It may be that far ahead. I'll explain why when we go into closed session. That may be the date, but we'll decide that when the subcommittee, probably the entire committee, meets when we go in camera a little later this evening. That's to make it very clear for the record. Rick, is there anything else I've forgotten in that, or is that generally what you understand?

**Mr Richard Campbell:** That's correct.



**The Chair:** So that does reasonably reflect the contact with Ontario Hydro, the fact that we did offer time early this week but it was not able to be accepted by Hydro.

### TRANSALTA

**The Chair:** With that information in mind, we will then proceed to our next deputation, which is TransAlta. Mr Chuddy, welcome to the committee. Would you be good enough to identify yourself and your colleague? Then we're in your hands for 20 minutes for presentation and questions and answers.

**Mr Steve Hodgkinson:** Just to flip-flop for you, I'm Steve Hodgkinson, the director of business development for TransAlta, and with me is Barry Chuddy, who is the director of independent power development for the company.

I'd like to give you a brief overview of who TransAlta is and what our interest is. TransAlta is an investor-owned energy company, with assets of over \$5 billion, headquartered in Calgary and operating through two principal subsidiaries: TransAlta Utilities Corp and TransAlta Energy Corp.

TransAlta Utilities owns and operates electricity generation, transmission and distribution assets supplying more than two thirds of the electric energy needs of the province of Alberta. TransAlta owns net generating capacity of about 4,500 megawatts of electricity, the vast majority of that being coal-fired thermal plants. TransAlta has been the electric utility in Alberta since 1911.

TransAlta Energy is in the business of electric and thermal energy supply, gas and electricity distribution, energy services and energy marketing in Canada, New Zealand, Australia, Argentina and the United States. TransAlta Energy holds a two-thirds interest in a company called TransAlta New Zealand, which is the fourth-largest electricity distribution company in that country. TransAlta also holds interests in eight independent power projects: three in Ontario, two in New Zealand and one each in Australia, Argentina and Alberta. The energy services and energy marketing businesses operate in Canada and the United States Pacific Northwest. In those locations TransAlta is among the top 20 energy marketers in North America.

TransAlta began working as an independent power producer in the late 1980s. Since that time we have built three cogeneration plants, representing an investment of over \$250 million in Ontario. We employ a staff of over 60 people in Ontario and produce 230 megawatts of electricity that's sold to Ontario Hydro. It represents an alternative energy source for our thermal energy customers who are major employers within Ontario.

We have a plant in Ottawa that produces approximately 70 megawatts of electricity and drives what is effectively a district heating system, providing all the thermal energy requirements to a campus of seven health care facilities in Ottawa. Through this system our most recent customer, the Perley Hospital, managed to build a brand-new hospital without the cost of building a central heating plant.

In Mississauga we have a cogeneration plant that produces 110 megawatts of electricity and provides services to the McDonnell Douglas manufacturing plant, which is now Boeing, at Pearson International Airport. Both the Ottawa and Mississauga plants began operations five years ago, in 1992.

Our most recent plant was commissioned last December in Windsor to supply 50 megawatts of electricity to Ontario Hydro and steam to Chrysler's assembly plant. That's the plant where Chrysler produces the majority of the minivans that you see on the road today. As part of this project, we took over operation of Chrysler's existing central steam plant, including all their existing staff, allowing Chrysler to achieve significant operating cost savings.

These savings helped the Windsor plant position itself competitively against their American counterparts for Chrysler. Within Chrysler, and many industries, there are competitions between plants on both sides of the Canada-US border for where different products will be produced. The savings that were produced in Windsor allowed Chrysler to continue and upgrade their facility there.

These cogeneration plants have proven, over the last five years, to be extremely reliable and have an availability in excess of 96%.

Two years ago we opened a business office in Ontario, recognizing the marketplace and the opportunities that exist here, and began working with a number of industrial customers and municipal utilities. Since that time we have formed a partnership with Consumers Gas Energy to look for synergies between gas and electricity distribution functions as a way of helping municipal utilities and the gas utility to reduce costs.

We have recently signed an agreement with St Catharines Hydro to provide electric load management, billing services, meter reading and collection services, and are having similar discussions with numerous other municipal utilities. These activities, in addition to the obvious benefit of cost savings, we believe will help position municipal utilities for the coming changes in the electricity business.

I'd like to call on Mr Chuddy to just outline our position before this committee.

### 1910

**Mr Barry Chuddy:** TransAlta's purpose before this committee is to address alternatives to Ontario Hydro's nuclear recovery plan. It is our view that the current nuclear difficulties being experienced by Hydro represent an opportunity for the province to take a positive step towards an electrical industry that will introduce prices set through competition. We believe there is an opportunity to explore options that can accelerate the pace of industry change as part of the recovery plan. Rather than accepting the view of spending billions of dollars to perpetuate the current technology and monopoly, we encourage the committee to examine these alternatives and take a bold step towards a competitive industry.

This committee has heard from the Independent Power Producers Society of Ontario, and others I expect, about

all the advantages of cogeneration and independent power. We do not propose to go over this information again, but there are two fundamental points we would like to emphasize.

The first point is that the capital cost and investment risk associated with satisfying generation requirements can be accommodated with no capital investment risk to the public and no requirement for provincial guarantees to support the arrangements.

The second involves the understanding that many people have about economies of scale and the notion that bigger is better. With significant advances in gas turbine technology and the achievement of efficiencies never before contemplated in electrical generation, it no longer is necessary or reasonable to add large generation projects to the system to produce low-cost power. Building plants in the 100-megawatt to 300-megawatt size range allow one to capture economic efficiencies while controlling the investment required and optimizing the locations of these plants to maximize the benefits to the electrical system, and significantly shortening the lead time necessary to build operating generation. The bottom line is that we can produce power at rates that are 20% to 30% lower than the cost municipal utilities and large industrials currently pay Ontario Hydro, with no capital risk to the government.

There are opportunities today to develop supply alternatives to meet Hydro's future needs. In the short term, we have the ability to increase the output of our existing plants by upgrading the gas turbines to increase their output and by potentially expanding plants to increase their capacity. Our Windsor plant was built for an expansion which could be completed in less than 12 months.

For some time now we've been working with large industries and municipal electric utilities towards looking at the feasibility of several inside-the-fence projects. These are generation projects designed primarily to provide energy to specific industrial customers. With the cooperation of the municipal utilities, these projects could be developed to supply economic surplus power directly to the municipal utilities to reduce their supply costs without the government of Ontario incurring any resulting debt obligations.

I think it is fair to say that industry and a number of municipal utilities are very interested in this type of scenario but have in the past been challenged by Ontario Hydro over their right to purchase from anyone else. We believe that if Ontario Hydro were to withdraw its opposition to this type of project, several projects amounting to between 500 megawatts and 1,000 megawatts could be brought into service within as little as 30 months.

TransAlta is prepared to enter into arrangements whereby we would supply industrial customers, municipal utilities or Ontario Hydro under relatively short-term contracts that would expire the day a truly competitive market exists in Ontario. At that time, the plants would become what are known as merchant plants and we would take on the risks associated with selling into a competitive market. The reason is simple: We would invest only in those projects that would not only be cheaper than current

utility costs but would stand the test of our predictions of a competitive Ontario market.

We also believe there are opportunities for private investors such as ourselves to enter into joint ventures with Ontario Hydro to maximize the efficiency of some of Hydro's existing generation and optimum site locations. This could take non-functioning sites or uneconomic plants that have not produced significant amounts of electricity for several years and produce a profitable, competitive asset without adding to the financial woes of Hydro or debt burden of the province. It will provide concrete environmental benefits compared to the current technology used to generate in those plants.

One of the cornerstones of any recovery plan implemented is that it should be compatible with the ultimate introduction of a competitive marketplace. Our proposal is to open up a portion of the Ontario market to competition as quickly as possible. The competitive component of the market could be sized to match the size of any anticipated reductions in output from the nuclear plants. The competitive market segment could initially include a defined class of customers; for example, industrial customers with an existing load above a defined threshold. Customers within this segment would be given a choice of procuring their supply competitively or remaining at their current supply costs from Ontario Hydro. One significant condition to this proposal would be that restrictions would have to be placed on Hydro such that it could not compete until the playing field has truly been levelled. In our view, the most expedient way to deal with this issue in the short term would be to allow the customers to make a choice and limit Hydro's participation in this defined market.

In closing, we would like to reinforce our points to the committee that there are real alternatives to Hydro supply as part of the recovery plan. To further take a step back, for a pricetag considerably less than \$8 billion, the private sector could supply over 4,500 megawatts of new competitive generation that could deliver low-cost power to Ontario by the year 2000.

We would like to extend an invitation to the committee to visit our 110-megawatt gas-fired cogeneration plant in Mississauga, and we would like to thank the committee for allowing us to express our views. We would be pleased to answer any questions you may have.

**The Chair:** Thank you very much, Mr Chuddy. I appreciate that. I have a couple of questions before we go to the caucus questioning.

On page 8, the last line, you indicate "a pricetag considerably less than \$8 billion." (a) Can you identify the pricetag, and (b) are you assuming that that pricetag would be picked up by the taxpayer or the ratepayer?

**Mr Chuddy:** For a pricetag in the neighbourhood of about \$4 billion to \$4.5 billion, that amount of generation could be built by the private sector. And no, the pricetag would not have to be picked up by the government. Our concept would be that the private sector would invest that money on the strength of likely some short-term supply arrangements that would expire when the competitive market comes into play.



**The Chair:** And would that be translated into the rates?

**Mr Chuddy:** The rates we would be charging for power would allow us to recover both operating costs and capital.

**The Chair:** Have you a sense of what that rate would take you into?

**Mr Chuddy:** The rate that we expect would come out of projects would be between 20% and 30% less than the existing municipal utility rates, which would put that power cost in the range of four cents a kilowatt-hour.

**The Chair:** Is that to the market or your cost?

**Mr Chuddy:** That's to the market.

**The Chair:** On page 7, towards the end of the initial but lengthy paragraph, the phrase appears "truly competitive market." Can you define that for me?

**Mr Chuddy:** It's a market where competition sets the prices. There's no artificial regulation setting those prices.

**The Chair:** I really do understand that, but the way you've written this, it is written "that would expire the day a truly competitive market exists in Ontario." How do I determine that suddenly the curtain has gone up and this is now the magic moment? Can you elaborate a little bit more on that?

**Mr Chuddy:** The kinds of events we were contemplating would be the type of events that would likely come as part of the implementation of the long-awaited white paper. What we would envision would be the regulatory revisions that would create a level playing field between the private sector and Ontario Hydro. Our definition of a competitive market is one where a level playing field exists such that no one party has any undue or unfair advantage over the other.

**The Chair:** So in your mind that would be a day when some kind of legislative starting pistol is fired to say, "As of that moment, this is now the field."

**Mr Chuddy:** Exactly.

**The Chair:** I think that's it. We'll now start the questioning. We have four minutes for each caucus, and it begins with the government caucus.

1920

**Mrs Johns:** In this documentation you talk a lot about supplying to industrial customers and to municipal electric utilities. It is of course the concern of everyone at this table that the residential ratepayer doesn't get stuck with the burden of this and in effect get a rate increase at the same time or consistent with that of the industrial user. What can you tell me about that in how you worded your document? Tell me what you were thinking about with the poor little residential guy who has a house.

**Mr Chuddy:** Our concept was that the types of projects we're thinking of would be effectively anchored by a long-term arrangement with an industrial customer, creating the opportunity for some power that's surplus to that industrial customer's needs to be supplied either to the municipal utility or to Ontario Hydro.

The surplus power cost characteristics would put those prices in the neighbourhood of 20% to 30% less than the cost the municipal utilities currently pay, thereby creating

the opportunity for them to effectively reduce their average rates to all their customer classes.

**Mrs Johns:** The stranded debt that's available in Hydro, and if someone is getting their hydro from some place outside Ontario Hydro — how would you see that being allocated through all the people of Ontario, or would you?

**Mr Chuddy:** To be frank, I'm not qualified to answer the question of how the stranded assets should be calculated or disbursed. There are many different models and many different ways it's done in different markets, and it really would be inappropriate for me to answer.

**Mrs Fisher:** At the beginning of your report it talks about almost a two-thirds predominance in the Alberta market. Something that hasn't been said at this table before but does worry me is that as we go through this, you can see that where there is a predominant source it always causes a risk. I don't know if that's the case in Alberta with gas only, but I do recognize the need for a blend. It worries me that somebody, like nuclear in Ontario at 66%, has the same predominance in another province.

I want to ask if you've heard of the Bruce Energy Centre.

**Mr Chuddy:** Yes.

**Mrs Fisher:** Some of the proponents at the hearings last week are thinking of a scenario like this: If gas was fed to the Bruce Energy Centre, in all probability it would not only protect the 400 jobs there today but allow for the expansion they've so dearly wanted for so long. Can you see a scenario where TransAlta or any other major company would be interested in looking at that scenario, where the excess generation would then be sold to Ontario Hydro, as it has in the past, but usually at lower levels? But to give the boost to the community, where Hydro's not the only predominant source, could you see that working?

**Mr Chuddy:** Yes, very much so. In fact, one of the concepts we would certainly endorse would be one where there was an opportunity to joint-venture with Hydro to refurbish or repower existing sites using more acceptable, more competitive forms of generation.

**Mrs Fisher:** So you can see it as a public-private opportunity.

**Mr Chuddy:** Absolutely.

**Mr Kwinter:** I just want to pick up on something Ms Johns talked to you about. You talk about your inside-the-fence projects. When we talk about the stranded debt — and that is the inability of Hydro to service that debt if their revenues are cut off because of competition — one of the suggestions, probably the most common suggestion I've heard so far, is that the way you deal with that is with some kind of charge on the distribution rates, the transmission rates. If you've got an inside-the-fence project, there will be no transmission using the grid; it's going to be a direct application from the energy producer to the user. Have you given any thought to how that would work?

**Mr Chuddy:** It differs with the industrial site. In some applications, the industrial customer simply couldn't afford to run independent of the grid. Therefore, to the extent that they would have to take services from the grid,

that should be a service that would have to be paid for as part of the project.

There are very few industrial customers that could actually put a project in place that will allow them to be completely independent of the grid. The reason is that the characteristics of the types of projects we're talking about are that there are times when the project has to be shut down for regular service or maintenance, or occasionally where there is an unplanned outage. A number of industrial customers simply can't afford to lose their power supply during those periods. Therefore, they would take standby power from the grid, and for that reason it is very site-specific to the industrial customer.

**Mr Kwinter:** What do you think their reaction would be if it was mandated that they paid for their share of the grid regardless of whether they are using it or not, but just on the amount of energy they consumed?

**Mr Chuddy:** I think you'd have to ask the specific industrial customer, to be frank. I guess one vision we have is that as long as the stranded asset is applied equally to all generation in the province, for example, then you effectively raise the bar so that you still have a competitive market, albeit at a higher level.

**Mr Kwinter:** That's what I presume. One other question that's interesting — I asked this question of an earlier deputant today — is the whole idea of merchant plants. I'm paraphrasing, but they said in effect that there isn't such a thing as a merchant plant, that that's a misnomer, that nobody is going to build a plant on speculation because they won't get it financed; it's going to be too heavy a burden for them. The only way they could possibly do it is to have contracts in place and regulations in place that would satisfy the lenders that there is a steady income stream that would service whatever capital expenditure this plant would entail. Do you have a reaction to that?

**Mr Chuddy:** I think there are truly merchant plants. The issue is the degree to which they want to mitigate the risks of selling into a truly open environment. We are currently developing projects in Alberta that are predicated on selling power into a spot market, and what we're doing to mitigate that risk is we're putting in place contracts for differences with industrial customers and other agreements to help mitigate the risk of that merchant exposure. But to say they can't be financed, to say you can't get gas for them I don't think is accurate, in that it depends on how you configure the project, how you mitigate the risks. We are going forward on projects that will be financed and will have a significant amount of merchant exposure.

**Mr Laughren:** Four cents an hour? The reason I ask that is that Ontario Hydro has told us they can rehabilitate, for example, Pickering A and bring us power at 2.5 cents a kilowatt-hour. I'm wondering to what extent the ratepayers in Ontario should be embracing TransAlta at four cents when they could be embracing Ontario Hydro at 2.5.

**Mr Chuddy:** Our recommendation would be if you could buy power at 2.5 cents a kilowatt-hour, if that were

the true, all-in cost, you should sign up for as much as you can buy.

**Mr Laughren:** When you compute your four cents, what portion of that is your share of the cumulative debt of Ontario Hydro?

**Mr Chuddy:** No share. We haven't included any stranded asset cost component in our analysis, simply because we don't have the numbers to support what that component should be.

**Mr Laughren:** Do you think that's fair?

**Mr Chuddy:** It's inappropriate for us to comment on how the stranded assets be divvied up among the province, be it on generation, distribution or transmission. I'm not qualified to answer your question.

**Mr Laughren:** Not qualified to answer with specific numbers, but you are qualified to indicate whether you think it would be fair that you would assume some of that cost.

**Mr Hodgkinson:** Certainly I think that's right. All generation, we believe, will have to assume some sort of levy for the stranded assets. What Mr Chuddy has talked about is just what we believe is the reasonable production cost, base price. If there is a levy of one cent or whatever it is per kilowatt-hour, if everyone is paying that and being treated equally, we think that would be perfectly fair.

**Mr Laughren:** Because Hydro is already paying that, right? Hydro is already charging that as part of the rates that ratepayers pay to Hydro, so it would seem to me that if the private sector wants in, they had better be prepared to assume a fair share of that. Is that fair?

**Mr Hodgkinson:** I'd have no difficulty with that. I would comment, though, that what Ontario Hydro is paying is taking care of the debt, presumably over a much longer period of time than under most of the proposals we've heard.

**Mr Laughren:** Absolutely. As a matter of fact, Hydro has said that part of the new charges of \$8 billion or whatever for rehabilitation will be moved forward on to my grandchildren and your grandchildren. That's what they've already said.

On page 7 you say, "TransAlta is prepared to enter into arrangements whereby we would supply industrial customers, municipal utilities or Ontario Hydro under relatively short-term contracts that would expire the day a truly competitive market exists in Ontario." What do you mean by short-term? That implies, I gather — and don't let me put words in your mouth — that Bruce A and Pickering A would not reopen.

**Mr Chuddy:** Our view of what short-term agreement is probably something in the range of five to 10 years. That would be considered in our industry a relatively short-term agreement. The specific situation that would require an entity to contract for that would be governed by the risks of requirements for capacity in the future, be it some nuclear capacity not coming back, be it risks of availability of the existing fossil. There could be a number of reasons, but any one of those reasons could dictate why an entity would be interested in entering into an agreement of that nature.



**Mr Laughren:** I appreciate that. What bothers me is that if Hydro says, "We still intend to reopen Bruce A and Pickering A," what kind of short-term contracts are you going to be able to enter into if it's a period of three years? It wouldn't be four cents, would it?

**Mr Chuddy:** The difficulty would be that if there was no need for the power, obviously the contracts wouldn't be entered into.

**Mr Laughren:** Beyond that.

**Mr Chuddy:** It would be beyond that, after that period of time.

**The Chair:** Thank you very much. We appreciate your attendance upon the committee and we appreciate your written deputation. If there are any further questions, I know the committee will be in touch with you. We appreciate your assistance.

That will conclude the public portion of the committee's meetings today. We will be going in camera for a business session. Before we do, I remind members that the public meeting on Wednesday evening is at St George's Anglican Church, 51 Centre Street in Oshawa, Ontario. Then we'll be back here.

**Clerk of the Committee (Ms Donna Bryce):** That's the afternoon.

**The Chair:** What time is it starting?

**Clerk of the Committee:** The hearings will start about 2:30.

**The Chair:** Hearings start about 2:30 on Wednesday, and then we'll bring you back here to get you in your jammies.

**Mr Galt:** On a point of privilege, Mr Chair: I understand that a few of the visitors to the Bruce A plant received rather severe injuries to their feet as a result of some new safety shoes that were being worn. I'm wondering if some different arrangement could be made at Pickering and/or Darlington. If not, we may have a lot of people limping along or looking for another kind of trans-

portation. Several are wearing Band-Aids as a result of the safety shoes from Bruce A.

**The Chair:** It is a point of privilege. Madam Clerk, he hurt his feet.

**Mr Galt:** I'm not the only one.

**The Chair:** If he wants to be a weenie, that's okay. We'll do what we can. I appreciate the point, and I shouldn't make light of that. I know sometimes the shoes can hurt. I bear a number of blisters on my feet, but I bear them gladly for the opportunity to be able to visit and to see the sites. I know an attempt will be made to find more accommodating shoes for you. We'll see what we can do.

**Mr Galt:** If you have your own, would you be allowed to wear them?

**The Chair:** Unless they're steel safety shoes —

**Mr Galt:** Yes, safety shoes.

**The Chair:** Then they go through the proper testing by Ontario Hydro.

**Mr O'Toole:** No, the testing is done by AECB.

**The Chair:** It may be AECB that has to do the testing, I don't know. We're not sure who would be the regulatory body to go to with safety shoes.

**Mr Galt:** Maybe at least we could have a choice, Mr Chair, could try two or three pairs on to find that they might rub in a new spot.

**The Chair:** I'd prefer that you do that on your own time and not on the public time. We'll worry about that one later, but it's a point well raised.

**Mr Galt:** Thank you for considering my point of privilege.

**The Chair:** I do take that as a point of privilege and I am ruling that we'll leave it in the hands of Ontario Hydro, I'm sure they will do what is right for you.

There's no further public business. This committee will now adjourn the public session and we will go in camera for private business for the next several hours.

*The committee continued in closed session at 1934.*





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## LEGISLATIVE ASSEMBLY OF ONTARIO

SELECT COMMITTEE ON  
ONTARIO HYDRO NUCLEAR AFFAIRS

Tuesday 4 November 1997

*The committee met at 0902 in room 151.*

## ONTARIO HYDRO

**The Chair (Mr Derwyn Shea):** The select committee will resume its business for the day. You may recall that we're picking up on deputations that were started last week, and it is a continuation of the briefing by Ontario Hydro. When we last left off, Mr Patrick McNeil was making presentations on the Genco implications of the NAOP recommendations. You were continuing, so I have allowed up to 30 minutes more for your testimony. Then we'll proceed to Ms Ng, who was waiting anxiously to start into the financial implications.

I'll begin with you, Mr McNeil, if you'd be good enough — the light is on and it's your spot — to identify once again for Hansard all your colleagues at the desk. Although they're all well known to us, that would be helpful before you begin.

**Mr Pat McNeil:** My name is Pat McNeil. I'm vice-president of corporate planning at Ontario Hydro. With me today are Rick Machon, the chief nuclear operating officer; Malen Ng, vice-president of corporate finance; and Eleanor Clitheroe, executive vice-president and chief financial officer.

At the last session I had concluded my remarks and we had gone through one round of questions, and I believe there was the desire to continue.

**The Chair:** There's nothing further you want to add this morning?

**Mr McNeil:** No, sir.

**The Chair:** Then I'm pleased to take us directly into the questioning, and that will be Mrs Fisher.

**Mrs Barbara Fisher (Bruce):** Good morning, and welcome again to these proceedings. I would like to pick up where I left off the last time. It has to do with a couple of issues. Mr Chair, do we have 10 minutes?

**The Chair:** Ten minutes per caucus.

**Mrs Fisher:** To one of the questions I ended on, your answer was a shrug of the shoulders, and I don't really know what that meant. The question was this: I went through the scenario of replacement fuel costs of \$2.1 billion and I went through a proposition where the Bruce units might be retubed in a different way and the boiler tube problem might be taken care of. You mentioned that you would then have the issue of some replacement fuel costs anyway. Now that we've had almost a week since

## ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

COMITÉ SPÉCIAL DES AFFAIRES  
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Mardi 4 novembre 1997

we saw each other, have you been able to rework your numbers to figure out that there might be another option that could be available to the community for consideration?

**Mr McNeil:** We're continuing to explore the other options. With respect to my remarks for the replacement energy costs, I believe my comments were restricted to the comment that you could invest some of the replacement fuel cost money. I think the question I was asked was in the context of using the fuel replacement money, and my response was that while the work was being done on the Bruce A units to return to service, there would still be the replacement fuel cost to come down.

**Mrs Fisher:** I think we agreed with that. If all seven units were shut down — it's not just Bruce that I'm worried about, I'm worried about Pickering as well, and I'm worried about the ability to purchase electricity at a more expensive price than what Hydro can produce it for, I'm told. If you make the assumption that all seven go down, an argument would be made that replacement fuel costs would be there.

But what if we make the assumption that they don't, and that we continue to operate a few while we refurbish a few and enter into that blend of discussion, private equity? I'm not hearing anybody fight the issue, right from the Power Workers' Union, who have been before us before, to the community we visited since we saw you last, to yourselves. I haven't heard anybody argue with regard to the private-public partnering issue with regard to the economics of retubing.

Again I ask you: Since last week, have you been able to go back and put another formula together or put another perspective to the issue as it relates to Bruce?

**Mr McNeil:** Ms Fisher, based on the information I've seen to date, the scenario of shutting down the seven units was based on the availability of resources to operate those units effectively and return the B units and the Darlington units to an area of operational effectiveness if other resources became available to supplement them. That's one of the options we will continue to consider.

**Mrs Fisher:** That's excellent to hear, because I think that's something we need to look at, but we need to look at it sooner rather than later. As it stands right now, things are happening as we speak. Things are being shut down in more of a permanent state than a lay-up mode. Right now the NAOP report recommends that we look at 1999 or 2000. Quite frankly, that's in all likelihood too late.



I'm asking for a commitment on behalf of this committee, number one, which has heard the same testimony from all proponents, but especially from the community I represent — I'm asking for a commitment to look at it sooner rather than later, and that means don't put them into a permanent dry lay-up stage at the end of March. I know there's some work that needs to be done.

I want to add one thing. At the Canadian Nuclear Association conference, British Energy made a presentation, and they made it here as well. It was obvious from each of those forums that there are workers out there, and that means there are probably management staff too. Mr Andognini has made it very clear that until we get the management culture repaired and refocused and enhanced in terms of numbers, it will cause us problems in terms of lay-up.

However, I would expect that if you know you have 200 laid-off British nuclear workers who were good enough to help us out bringing up the Douglas Point Candu system originally, there probably is some available management staff. In their presentation to this committee they made a commitment to look worldwide at helping others in the recovery plans of nuclear industry. I challenge you, please, to find out what is available there on our behalf.

I want to go on to another point before I lose this opportunity. It's the second issue that we unfortunately got cut off on last time. In this community that I represent, there are three issues right now that Ontario Hydro impacts, although they really only own two of them; they think they own the third. In a very critical way, from my perspective, they've been an interfering body, not a complementary body, to the Bruce Energy Centre since 1987.

Last week presentations were made at the public forum. I asked you here last week whether you saw any progress being made in the negotiations to replace Hydro's responsibility for the steam issue. Obviously, that could possibly, through cogeneration, tie into allowing that community to have something of its own for a change that produces lower-cost electricity. In the updates from the major proponents of the Bruce Energy Centre at the public hearings last week, I asked you the question, were you working with them? You said you were working cooperatively with them. At the hearings I asked them the same question, and the answer was, "If that's cooperation, I don't know what it means." Could you tell me what that means?

0910

**Mr McNeil:** No, I can't. I wasn't aware of the testimony from the other people who testified before you. I can assure you that we are working as cooperatively as possible with the proponents and the people who are on the Bruce Energy Centre to resolve this. As I mentioned, Ontario Hydro is seeking a win-win solution for everybody and to encourage the ongoing viability of that area. Ontario Hydro's obligation to supply steam is a very serious one which we are undertaking to meet in a reasonable-cost fashion.

**Mrs Fisher:** We've known that for a long time, but we also know that right now, while all of Bruce A is down,

you're subsidizing the steam performance or the steam provision to the tune of a million dollars a month. There has been, at your request, I understand — I'm at liberty to talk about this; I asked before I did this. From all proponents, there were two proposals put forward to you with a closure date of October 6. You put out terms of reference to make those happen. They proposed in good faith. They're now told you're going back inside, reworking it and doing it again. Can you explain to me why you would do that? I don't call that working in good faith with anybody.

**Mr McNeil:** Your understanding of the process is different from mine. We have been working with the people on the Bruce Energy site to bring forward proposals from all the proponents rather than from one or two; and to ensure that all the people on the Bruce Energy site, given our contractual obligation to supply steam to the individuals there, concur with the direction we're going in.

**Mrs Fisher:** I'll correct you on that: They do not, and it was very clear at the public hearings that they do not. But you're right; all were given the opportunity. The closure date was October 6. You were then in receipt of two proposals. You've now decided to go back inside again and try to do it the Hydro way. I challenge you to let the community have a forward foot on this one and let them be the provider to Ontario Hydro for its minimal needs in terms of the residual of what would be needed from the Bruce Energy Centre. We have to cut the interference by Ontario Hydro to that centre for it to proceed.

Quite frankly, Ontario Hydro has been in our way since 1987, when it made a commitment to provide low-cost energy, including electricity, to that site. It took till 1992 to negotiate a steam rate, and still has done nothing better than 7.2 cents a kilowatt-hour for industrial uses, all the time hiding behind the past Power Corporation Act. I ask you to please work today and tomorrow, not a month out and not two years out, on resolving this issue and get out of the way. Cooperatively come with them — I understand the need to do that because you have contractual, legal obligations — but give the community a chance to have ownership of this for a change. I ask you, can you please consider doing that?

**Mr McNeil:** We have entered a process which should give all the proponents at Bruce Energy Centre, including anybody in the community who wishes, an opportunity to bring forward proposals that would allow us meet our contractual obligations.

**Mrs Fisher:** The closure date on that was October 6. You have two before you to consider now. You invited all participants who came up, those who wanted to be there. Consider those. That was your obligation under the terms of reference.

**Mr McNeil:** Yes, and we've considered the proposals we've received and we expect additional proposals to come in.

**Mrs Fisher:** You don't close something and then reopen it at your convenience.

**The Chair:** Thank you, Ms Fisher. Mr Conway?

**Mr Sean G. Conway (Renfrew North):** Mr McNeil, in one of these myriad documents there is reference to commercial opportunities at Sir Adam Beck. Do you want to speak to that point? What potential is there at Beck? How much megawattage are we talking about? What are the time lines for bringing that on stream, and are there any constraints with respect to doing so in the next three to five years? I'm looking at some of your documents; there's an Everest of paper around here, so I'd excuse you if you couldn't find it either.

**Mr McNeil:** I can find it, sir; I'm just trying to find the level of detail you've requested. On Sir Adam Beck 3 there are, as we refer to the commercial opportunities, two additional development opportunities at Sir Adam Beck. One would result in an additional provision of 50 megawatts of peak load meeting capability to the grid. The other one, which we call the full development side, would result in about 600 megawatts.

There are two issues related to Sir Adam Beck 3. Sir Adam Beck 3 really is an opportunity for the future rather than an opportunity during the interim, while we replace the lost energy. The lead time for the partial development — that's the 50-megawatt development — is approximately seven years from the time it started, and for the full development it's approximately nine years. The cost associated with the energy that would be expected after those developments for the partial development is in the order of about three cents and for the fuller development is about five and a half cents. Given the three-cent full development cost of the energy, given a suitable time frame and a capacity need, Sir Adam Beck 3 poses a realistic option for meeting future energy needs.

**Mr Conway:** I want you to back up and repeat that slowly and clearly. I haven't heard very much about Beck 3. It's been on the books as a potential for several years now, and you tell me that fully developed it would be 500, 600 megawatts and it —

**Mr McNeil:** The additional capacity, sir, yes.

**Mr Conway:** Just give me a Dick and Jane. I want to be clear. Sir Adam Beck commercial opportunities: What are they? At what cost? At what price? With what constraints? And why haven't we heard more about this in the last little while? Those are my questions.

**Mr McNeil:** I'm not sure why you haven't heard more about this in the testimony of the witnesses before you. The Sir Adam Beck 3 remains a development opportunity for the province. In terms of this partial development, again, a partial development with a lead time of about seven years is about 50 megawatts. It's fairly good-priced energy. The difficulty is the lead time. The difficulty also is, when is additional capacity needed and over what time frame?

**Mr Conway:** You're mixing me up. I'm getting annoyed because you're talking about something that's going to give me 50 megawatts and something else that's going to give me 500 or 600 megawatts. Do you want to separate those clearly? I'm not making the distinction that you are.

**Mr McNeil:** One is a larger development than any other; one is more capital-intensive than the other.

**Mr Conway:** Which is which?

**Mr McNeil:** The partial development is a smaller development, with a shorter lead time and with a lower price.

**Mr Conway:** That's the 50-megawatt piece of Beck 3.

**Mr McNeil:** Right.

**Mr Conway:** So the small piece is 50 megs at five to seven years?

**Mr McNeil:** The lead time is seven years now.

**Mr Conway:** At what price?

**Mr McNeil:** It would come out roughly in the order of three cents.

**Mr Conway:** The big piece is 500 megs?

**Mr McNeil:** About 600 megawatts.

**Mr Conway:** About 600 megs. How much lead time?

**Mr McNeil:** About nine years.

**Mr Conway:** At what price?

**Mr McNeil:** In the order of five and a half cents.

**Mr Conway:** Why is the bigger piece giving us electricity that would cost nearly twice what it would cost from the smaller piece?

**Mr McNeil:** It's a fuller development and gets you more capacity, but the amount of river flow and the amount of water available limits the amount of energy you'd actually get out of it.

**Mr Conway:** Are there any constraints on our use of the water that might be required to do the big piece or the small piece?

**Mr McNeil:** As you know, we share the water that goes down over the Niagara. We have sufficient water rights that would allow us to produce about two terawatt-hours a year out of the fuller development.

**Mr Conway:** Again you've lost me here.

**Mr McNeil:** We share the Niagara River between the United States and Canada. We retain sufficient water rights per se to allow us to generate about an additional two terawatt-hours of power through Sir Adam Beck 3.

**Mr Conway:** Are there any of those rights that lapse within the next three to five years?

**Mr McNeil:** I can't speak authoritatively in that area. I don't believe so, sir, but I can't speak with authority on that.

**Mr Conway:** We've got a recovery plan that has a very controversial substitute power. We're going to be putting all manner of crap into the air that's giving pause to a lot of the environmental community in Ontario and has the attention of the Republican governor of New York. I would have thought we would hear more about Beck 3. Beck 3 has been on the books as a possibility for a long time. Are you telling me it is basically both the time it will take to bring into production and the price that make it unattractive?

**Mr McNeil:** For the partial development it's primarily the time; for the fuller development it's the price and the time.

You made some comment, sir, with respect to our emissions. Our emissions are going up substantially while



we're awaiting the recovery of the nuclear side. As the nuclear units recover, the fossil emissions will decrease in the province.

**Mr Conway:** But you seem to be taking a very rigorous approach to the price on the hydro-electric side and putting a great deal of faith in the price of the nuclear option downstream. If we've learned anything over the last 10 or 15 years, Ontario Hydro Corp's estimated costs of nuclear have been among the most reliable of anything. I just get the feeling that you're applying a much more rigorous, sceptical attitude towards Beck 3 than you are to some of this nuclear recovery.

0920

**Mr McNeil:** I wouldn't say we're sceptical of Beck 3 at all. It's a matter of when you commit to spend the funds.

**Mr Conway:** If you've got 600 megawatts at Beck 3 — I don't get the sense that Beck 3 occupied very much of anybody's attention at head office over the last little while as people have run madly about in all directions to try to fill this gap of several hundreds or thousands of megawatts that will be created because the A plants are coming down for a period of at least four to five years.

**Mr McNeil:** As it stands now, the nominal plan is to return the Pickering A units starting in the year 2000, so it's not quite four to five years. Again, the reason Sir Adam Beck 3 — particularly the fuller development. The fuller development has a higher cost. It wouldn't be as economic as the more partial development, and the reason the more partial development wasn't considered at this time is because of the time frame in which it would show up. We are highly regarding the Beck 3 in terms of future supply options should Pickering A or load or anything else change our underlying assumption.

**Mr Conway:** But as Ernst and Young has pointed out, there are a lot of assumptions in this recovery plan that give people pause. One of the concerns I have, quite frankly, is that I don't know that your fossil plants are going to be able to take the stress of the additional capacity and expectation that has been assigned to them. You seem to feel that's not a problem, that you're going to get all the capacity, all the production out of Nanticoke, Lambton and the other fossil plants that this plan calls for.

**Mr McNeil:** Yes, sir, I do.

**Mr Conway:** What gives you that level of comfort?

**Mr McNeil:** Experience, sir, and past experience with the fossil fleet in particular. As I testified last week, the fossil fleet is operating in the upper quartile of the neighbouring utilities, and the fossil fleet also has the experience at operating at the 34- and 35-terawatt-hour level in the late 1980s and early 1990s.

**Mr Conway:** But you're taking the fossil plants out of the minor leagues and making them the big league carrier for the next few years.

**Mr McNeil:** I wouldn't want to relegate the fossil plants to the minor league, sir. I would say we're increasing the energy production by a factor of two.

**Mr Conway:** Yes. You're increasing the energy capacity by a very considerable amount.

**Mr McNeil:** Which puts them in an annual operating capacity, if I recall correctly, of about a 35% capacity factor over that period of time, compared to the fossil fleets in the rest of the industrialized world, particularly in the United States, where we'd be purchasing from, of average fleet operating factors of 65% to 70%.

**Mr Conway:** But when you cranked up the nuclear plants over the last few years and you got some good production and some good capacity, after a very short period of time they were blowing gaskets all over the place, and then we end up with the IIPA telling us that there were all kinds of difficulties because of the additional stress. Now we're being told, "We're going to transfer a lot of this burden to these fossil horses and they'll just charge off like the Carlsberg team of Clydesdales and there will be no problem." I hope you're right, but I'll tell you, past performance in some other aspects of Ontario Hydro's operation don't give me a great deal of comfort.

**Mr McNeil:** Sir, I'd also like to advise you, as I think I may have mentioned last week, and I apologize if I didn't, that we also have contingency plans in place to ensure that the energy needs of the province are able to be met.

**Mr Floyd Laughren (Nickel Belt):** Welcome back to the committee, Mr McNeil. I've been somewhat taken aback as these hearings have gone on by the sense of animosity towards Hydro. Ms Fisher expressed it in a very tame way. When we were up in Bruce county, I was surprised at the feelings in the community towards Hydro — not towards the local plant. Their expression was "the 19th floor." Deputant after deputant was very angry at Hydro. As director of corporate planning, I think your title is, how did that happen? How did you lose all your friends? I don't mean personally, of course.

**Mr McNeil:** Maybe I have lost some of my friends too. But I can't go that far back in history, and I'm not aware of the testimony you received at the Bruce. I was appointed to corporate planning in September of this year. Prior to that, my exposure to decisions at the 19th floor and the process — I couldn't speak to it. And again I can't speak to the testimony. All I can say is that I have not seen evidence in my tenure of a disdain or a lack of cooperation or a lack of willingness on the part of the so-called 19th floor. Some of us aren't on that floor.

**Mr Laughren:** But you're striving.

**Mr McNeil:** Not necessarily.

**Mr Laughren:** I'll give you an example. The folks who were very concerned about the Bruce Energy Centre said they had lots of cooperation from the local folks up there, but as soon as they got to Toronto they hit a brick wall. One example they used, and Ms Fisher knows much more about it than I, was the fact that you charged them rural rates even though you're next door. They couldn't break through to Hydro to get them to understand the importance of the difference between rural rates and the other rates that would have been significantly less.

**Mr McNeil:** I think we understand the difference between rural rates and the rates they were looking for in terms of what the price is. The question that comes in is

our ability to deliver those to them. I believe the Bruce Energy Centre and the community would have to form a utility to get access to do that and I believe they would have to go through the township to form that utility. As far as I understand, and I'm not an expert in this area so we'd have to get this confirmed later on, I don't believe six or seven individuals or corporate entities could form a utility.

**Mr Laughren:** To those folks that's a bureaucratic answer that doesn't deal with the reality of their problem, that's all.

**Mr McNeil:** Sir, that answer is found in the Power Corporation Act, which gives rise to Ontario Hydro.

**Mr Laughren:** Let me move on to another area that surprised me. There are, it seems to me, an increasing number of people who say that instead of the recovery plan as approved by the Hydro board on August 12 this year, what you should do is get into the real world — these are other people's words, of course — and admit that when you do the dry lay-up of Bruce A, it's not going to open again. Therefore, if you want to have contracts that are of a reasonable price that people can bid on, you've got to give them a contract for security of tenure of 10 years or more. Do you have evidence that you can do a dry lay-up of a plant like Bruce A for three years or more and then reopen it? What makes you think you can do that?

**Mr McNeil:** The concept of whether you do a wet lay-up or a dry lay-up is an item that I believe Rick has talked to previously in his testimony. Would you like to add a more technical side, Rick?

**Mr Rick Machon:** Fundamentally, the reason for going into a dry lay-up, ie, removing the fuel and going into dry lay-up, is to allow us easier access to get into retubing, to get the pressure tube issue behind us.

**Mr Laughren:** I understand, but I don't want a technical explanation. What I want to know is, what evidence do you have that if you do that dry lay-up you'll reopen that plant? People told us there's never been a case of a dry lay-up for that length of time and then having the reactors reopened.

**Mr Machon:** I can give you some personal experience in that area. As I mentioned, I came from the Brown's Ferry plant, TVA, that was shut down in the 1984-85 time frame. Unit 2 restarted in 1992 and unit 3 restarted in 1995; I think it was 1995. Both plants were in a laid-up condition during that time frame. Both plants were defuelled. Different technology, obviously, vertical versus horizontal fuelling, but they were both defuelled. They were laid up. Most of the systems were dry, air blown through them, dessicant to remove moisture at the time to avoid corrosion problems. Those shared systems that were needed for — I want to say earth, wind and fire — electricity, air and water that were required were kept in chemistry and kept in spec. The units came back and they're both operating at very high-capacity factors at this point in time.

0930

**Mr Laughren:** It's a comparison you can make?

**Mr Machon:** Yes, to taking care of the equipment, taking care of the systems. The big difference between the Pickering lay-up and the Bruce lay-up is the fact that we're going to defuel Bruce. We're going to leave Pickering fuelled so it will move right into its startup in, normally, the 1999-2000 time frame. Don't forget, again, they were going to be down the majority of next year anyhow from a generation standpoint. That's just to allow us rapid access to get into the pressure tube replacement. We can do some mock-ups and work in advance, those sorts of things, and get ready. It can be done.

**Mr Laughren:** If and when Bruce A is started up again, what would be your best estimate of its projected life at that point?

**Mr McNeil:** Depending on the amount of work that is done to return the Bruce A units to service, and it depends on whether you do the boilers and the pressure tubes at the same time — there are some options; we're still evaluating how you would package that kind of work — anywhere between the end of its depreciation life, which I believe would be about 10 to 12 years, but if you did a more complete job, and we are still in the process of identifying what that is, you may be able to get another 10 years beyond that out of it. Again, the options analysis we've done on Bruce A has been very preliminary and we've really focused our attention to the option of getting it to the end of its depreciation life, which is roughly 10 years of work.

**Mr Laughren:** From the time it reopens?

**Mr McNeil:** From the time it reopens, right.

**Mr Machon:** One of the advantages we have by not having a 40-year operating licence, ie, going back periodically for licences, is that there is no term to that licence other than to keep justifying moving forward. In the States, to go beyond 40 years you have to go through a whole relicensing process. They call it plant life extension. As you know, a lot of plants are replacing steam generators or boilers in the States and going through some major equipment upgrades. When they get to the end of the 40 years, you have to go through a rigorous regulatory process. It can take five to 10 years to get yourself through the process, to get beyond 40 years. We have this every two years or nine months, depending on what it is, a process that allows us to go through. So the justification can be built as you're going for those units.

**Mr Laughren:** When Bruce A is laid up, do you then immediately start on the work on Bruce A? You do the Bs first, right?

**Mr McNeil:** Yes, we'd return the Bs to an operational acceptance level.

**Mr Laughren:** Yes, to more efficient levels of operation. Let's just stick with Bruce for a moment. At what point then do you start the work on Bruce A?

**Mr Machon:** I believe it starts to kick in in some significance — remember that cash flow diagram we had? You'll see that start to rise above base. I think it's about the year 2000-01 you'll start to see an increase as we start the preparation for the work. Coming into 1998, the activities will be — you're obviously keeping it operating



through April 1 normally. Then it will be focused on defueling, getting the systems in a laid-up condition, getting the humidified air etc in it over the remainder of the year, springing some of the resource free, holding it in a laid-up condition until I believe about the year 2000. If you notice when that starts to increase, that —

**Mr Laughren:** The reason I ask that question is, I'm wondering at what point in that whole process you make your very tough decision on the future of Bruce A; very tough for that community, I must say, as well as for Hydro.

**Mr McNeil:** Looking towards the Bruce A decision, I would expect the Bruce A decision would be brought forward in the later part of 1999 versus the early part of the next year after that.

**The Chair:** Mr McNeil, a couple of questions for you. I'm going to go back to Beck 3 that Mr Conway was questioning on. What is the total cost of Beck 3?

**Mr McNeil:** We have an estimate of about \$630 million for the partial development, and for the complete development, which is the 600 megawatts I referred to, the fuller development, it's about \$1.6 billion.

**The Chair:** Has the environmental assessment all been completed?

**Mr McNeil:** The majority of it has, yes.

**The Chair:** You did indicate that the larger capacity, the full capacity is a nine-year lead time.

**Mr McNeil:** Yes.

**The Chair:** And it would bring in at 5.5 cents per kilowatt.

**Mr McNeil:** About five and a half cents on average for all the energy.

**The Chair:** That means you would be able to provide this committee with all the details and background on Beck 3?

**Mr McNeil:** Yes, sir, what we have today.

**The Chair:** Thank you, if you'll provide that for the members of the committee, please.

**Mr McNeil:** Yes, sir.

**The Chair:** There was a member of the committee who was asking about the possibility of an RFP for Bruce. I don't want to presume her questioning, but it was on the lines of whether Ontario Hydro would be interested and/or willing in terms of opening up an RFP to see if anyone would be interested in operating one or more of the units at Bruce. Do you recall the question that was put to you? I think it was by Ms Fisher.

**Mrs Fisher:** Yes, it was. It was to refurbish and operate, not just operate.

**The Chair:** All right, to refurbish and operate. That's obviously not something you can answer immediately, but is that an issue that you would be able to take back and lay a response before this committee within the next several days?

**Mr McNeil:** I believe I could try to get a response. I can't guarantee what the response would be like. I would have to go back and start looking at what the legal issues are and what the licensing issues are with respect to the operation of that plant.

**The Chair:** I think that's reasonable. If you can at least provide to this committee what the response would be and what the caveats would be, the committee will then deal with the caveats.

**Mr McNeil:** Yes, sir, we could do that.

**The Chair:** It would be helpful if you could.

**Mr McNeil:** Given the time available, if we were to have a response during this week, it would have to be a very preliminary response.

**The Chair:** I think the member would find that acceptable at least as a starting point. Then the committee will take it unto itself and begin to peel the onion back in its own inimitable fashion.

**Mr Conway:** Mr Chairman, just a question for you and for staff while Mr McNeil is here. One of the questions that presents itself to me is Hydro's expected price for power of all kinds over the period 1997 to, say, 2007 or whatever, just on the basis of current expectations and current assumptions. For example, to be told that the price of power at Beck 3 is five and a half cents for the full, larger project is an interesting statistic. I guess maybe this is a question for staff: Are we confident at this point that we have out of Hydro all that we need in terms of the other prices quoted, the assumptions underlying prices, so that we've got a good context as to what the pricing assumptions and the price delivered to Hydro of alternate power would be over the period of the next five to 10 years?

**Mr Robert Power:** I hate to say this, but the short answer is that Mr Campbell has responsibility for that issue and he's out of the room at the moment. From my perspective, no, we haven't got that stuff completely yet.

**Mr Conway:** It's interesting to be told it's five and a half cents, but I'd want to know in what context that figure sits. What are the expected prices of the power delivered from the returned nuclear plants? What are the prices being quoted downstream for gas-fired electric power?

**The Chair:** That's a reasonable request. We've been working in that direction, to piece together that jigsaw puzzle over the last several weeks. I'll take it upon myself to work with research, with staff and with all of our deputants to see if we can start piecing this together.

**Mr Conway:** I'm sure Mr McNeil has a substantial amount of data that he will be happy and willing even to share with us.

**The Chair:** I think it could be here shortly.

One final question: I want to make sure I was clear for Beck 3, or for Beck at least. Your evidence was that there was at least an additional two terawatts in the river.

**Mr McNeil:** Yes, sir.

**The Chair:** And we're looking, at least in the shortfall, for 4,000 megawatts.

**Mr McNeil:** During the interim period of time that the Pickering A and Bruce A plants are shut down. Again, Sir Adam Beck would not be delivered within that time frame. Sir Adam Beck is one of those options we would look at to compare the business case for reinvestment in Pickering A or reinvestment in Bruce A.

**The Chair:** We're looking forward to receiving that information from you. I thank you now, Mr McNeil. If you'll just relax for a moment, it's time to turn the spotlight over to Ms Malen Ng. Once you've made your presentation, Ms Ng, would you be good enough then to know that we will also open up the questioning with Ms Clitheroe here. I think it would be appropriate that you both join in the responses. In fact, I think it would likely be appropriate, since we're dealing with the financial implications and all of the issues, that all of the deputants be available for questioning as we move into this round as well. If you'll make the presentation, I appreciate that.

**0940**

**Ms Malen Ng:** Good morning. My name is Malen Ng, as Pat has indicated, and I am the vice-president of corporate finance in Ontario Hydro. I have been in this position for about a year and I report to Eleanor Clitheroe, the chief financial officer.

My involvement in this particular process is to support the CFO in providing a corporate consolidated view of all the NAOP-related impacts and reviewing the overall impact on Hydro's finances.

I believe you all received last week a copy of the presentation that I'm going to use. The information contained there is actually very similar to that which was presented to the board of directors in their August 12 meeting. The numbers, the themes and the issues are essentially the same. One difference, though, is that in the August presentation we provided the impacts of three scenarios relating to the return to service of the A units, given that the decisions were yet to be made. For a better focus in this presentation, I have narrowed the numbers down to the scenario whereby Pickering A and Bruce A would be returning to service. I believe you have the presentation that actually extends the graphs to make it three bars instead of one bar in terms of the results.

Turning to the presentation, page 2 of the material you have contains an outline of what I propose to cover. Last week, Rick Machon talked about the nuclear asset optimization plan, Pat McNeil talked about the power systems implications and they both discussed the cost components that are related to those actions.

What I wanted to provide today is the corporate consolidated view of all the impacts, starting with the basis for the corporate financial implications and then talking about the sum of all the impacts that you have seen; the financial outlook that incorporates all the incremental impacts; the risks surrounding that outlook and the issues associated with it; and last but not least, given the significance and magnitude of the dollars, discuss a bit some of the ongoing reviews that will be there to flesh out the plans and to review the costs.

First, the basis for the financial implications: The 1997-99 business plan was used as the basis to identify the incremental impacts. The 1997-99 business plan was a plan that was prepared late last year and approved by our board in January of this year. We had then extended the three-year plan to the year 2001 to allow for a five-

year picture. Then we layer in the impact of the NAOP, plus the Genco actions.

Very quickly, in terms of some of the assumptions underlying that plan, specifically noteworthy is that, for example, we have assumed no growth in revenue over this period, which essentially means no sales growth and no price increases. The no sales growth is a conservative planning assumption, as our most likely forecast calls for about a 1% growth annually over that period, but for financial prudence, we have basically assumed that there is no revenue growth. One thing I should note is that this year's business plan is being prepared right now and obviously these assumptions would be updated during that process.

I want to introduce the financial review by looking at some of the overall impacts. The information here is shown in terms of total impact over the 1997-2001 period. The numbers you're looking at there, which are increments over the business plan for the five-year period, have shown the impact based on both Pickering A and Bruce A returning to service after their lay-up, and the second scenario essentially assumes that Bruce A and Pickering A would not return to service after the lay-up.

Going down the line, we've shown you the impact in terms of higher OM&A, the impact of the replacement energy costs which Pat has talked about and the interest costs as a result of not being able to pay down the debt as originally expected. Those are primarily the ones that are causing the operating impact on net income to the tune of about \$5.3 billion under the first scenario and \$4.2 billion under the second scenario.

On top of that, there are also write-offs that must be considered. If it's decided that Bruce A and Pickering A are not to come back into service, then there needs to be a write-off pertaining to the remaining book value of the A units. There also has to be a write-off pertaining to the construction projects that are currently in place, also related to staff costs and some other provisions. In the case whereby Bruce A and Pickering A will be returning to service, the only write-off that would be needed is the write-off of the construction projects at the Bruce A stations, because the number of years between the lay-up and the return to service would be long enough that the value of those construction projects would be questionable.

When you add up the total impact on net income, which is sort of a measure of an operating statement impact, it's about \$5.5 billion for the first scenario and \$7.6 billion for the second scenario, which is the bound of the \$5 billion to \$8 billion that had been referred to previously.

On top of that, what I've shown on the bottom line is what we call capital expenditures. As a result of the incremental work in the nuclear, fossil and transmission areas, some increase in capital expenditures would be expected, to the tune of about \$1 billion, over the five-year period. I should note that the impact on net income from these capital expenditures has already been embedded in the above numbers, so it's probably not appropriate to add the two.



This is sort of a high-level summary of all the numbers. What I'd like to do now is actually go through each of the components and show you what some of the components are.

First, look at the total operating cost increases. Notice that the biggest component in terms of the increase over the previous plan for each year is primarily in replacement energy cost, which is the number that Pat has been talking about. On the bottom bar there is the OM&A cost, made up of both nuclear and fossil, and on the top, the other, primarily the interest as a result of the increased expenditures.

In terms of the replacement energy cost, this chart here shows you the makeup of the higher fuel cost as a result of the higher fossil generation and the component as a result of the loss in secondary sales profit because of the curtailing of the secondary sales as a result of lower nuclear production.

One thing you should note as you go through the years 2000 and 2001 is that there is a decrease in the replacement energy cost as the Pickering A units are expected to return to service in this scenario.

In terms of OM&A costs, primarily nuclear, related to the work that Pat and Rick talked about at the last meeting, also, in terms of fossil, these are the incremental fossil costs, about \$75 million a year, in relationship to the higher fossil generation and to improve fossil reliability.

From other cost increases, again three components there: The biggest component is the interest and depreciation that I talked about earlier on. The increase in interest is because of the increased cash expenditures that will be needed to fund the NAOP-related actions. As a result, we will not be paying down our debt, and as such, interest costs will be higher.

Another component is heavy water revenue. Here, what we have assumed is that as a result of the shutdown of the Bruce heavy water plant, there is a potential loss in the heavy water revenue associated with the AECL contract. This is a conservative planning assumption and current discussions are still going on with AECL pertaining to that contract. There is another piece related to some changes in provision levels. Those are the impacts on current operations.

Now look at the capital increases. A large part of the capital increases over this period, a total of about \$1 billion over the five-year period, is related to nuclear. Again, I think Rick has talked about some of the work that's necessitated through NAOP. Then Genco, those are the costs associated with some of — the air emission strategy, some of the Lennox conversion to gas. Then we also have a piece associated with transmission expenditures, and that's a piece that's needed to increase the transmission capacity to carry additional generation from other sites as a result of the loss of nuclear generation.

This looked at all the incremental impacts. It's just a very quick walk-through in terms of consolidating the stuff that you had seen from the last two presentations.

Now, looking at the impact on the current financial outlook, incorporating all these incremental expenditures,

this is the net income that was previously projected in the business planning process, and as a result of all the incremental expenditures we just talked about, we're going to find net income coming down significantly lower than previously planned. As a matter of fact, assuming that rates are being held constant, the company will be in a net loss position for the next few years, and also net income will be below the SDR level. I will come back to this SDR level later. This SDR level is an amount that the board is obliged under the PCA to ensure it's collecting in rates. We'll come back and deal with that issue.

#### 0950

With the net loss, we're expecting that there will be a draw-down in our equity or our retained earnings over the years, whereas in the business plan we were expecting that the net income each year would be added to our total equity amount with an increase. Here we're basically looking at a completely different trend.

Another element is the debt outstanding. Over the last few years — if you notice the curves here — Hydro has been paying off its debt, specifically from 1993 to 1996, with pay-down of close to about \$4 billion worth of debt. This is made possible because our revenues include a charge for depreciation for our facilities that are currently in service, and that depreciation in the net income that we get is significantly higher than the amount of capital expenditures that have been needed over the last few years. What that means is that there is a lot of internally generated cash flows available to pay down our debt.

In the previous plan we were actually projecting that the debt would continue to decline, to the tune of about \$7 billion to \$8 billion, from 1997 to 2001. With the increased cash requirements from NAOP and a lot of the generation-related actions, that means essentially debt will remain quite constant. Instead of declining by about \$7 billion to \$8 billion, we are looking at debt declining by about \$1 billion to \$1.5 billion over this period. Having said that, though, it also means that all the incremental cash flows from NAOP and the replacement energy costs can be accommodated within the internally generated funds.

A quick look in terms of the increased cash requirements as a result of NAOP; again, you have looked at some of these components before. The largest component is the replacement energy cost and there is the OM&A cost as well as the capital cost. "Other" is primarily the interest charges as the debt increases from what it would otherwise have been.

In summary, when you look at this outlook, it's definitely a much more deteriorated outlook compared to what previously was expected and the outlook is subject to a number of risks, as are any other forecasts: some external risks pertaining to the sales forecasts, the revenue forecasts. Given the high level of our debt, we're very vulnerable to changes in financing rates, interest and foreign exchange rates. As a result of a high fossil generation, we're also very sensitive to fossil fuel prices. Some of the internal risks are, for example, nuclear performance and costs en route to nuclear plan recovery and also the cost of

other operating facilities. At this point in time a review is being conducted on all the other operating facilities, be they hydro-electric, fossil, transmission or distribution. The review is intended to be completed — I think one part of it, which is the physical condition, is intended to be completed by the end of the year, and the other one, which is the management processes, early next year.

Given the outlook, coming back to look at the SDR issue, under the PCA the Hydro board is obliged to set rates that are sufficient to recover costs, and "costs" is defined in the Power Corporation Act including a component for statutory debt retirement. It's a prescribed formula which calculates an annual amount that has to be recovered in rates by the Hydro board. Also included in "costs" is a discretionary amount which the board can set aside for reserve as part of a net income as well.

If you look at the financial outlook again, with the net income forecasts or the net loss forecasts for the next few years, there is a bit of a question in terms of how the board would be able to meet its fiduciary responsibility in terms of the SDR.

The board operates, under a normal situation, in a rate-regulated environment. The board, under this kind of situation, would be considering a rate increase. Given the government policy of a rate freeze until the end of the decade, there are three additional options available to the board in terms of meeting the SDR. In the absence of a rate increase, the board can choose to exclude NAOP-related costs from rates each year to achieve the SDR, and the second and third options are for the board to apply a rate ruling which then accounts for the costs differently in terms of either bringing them forward into 1997 or deferring and amortizing them.

One thing I should note is that none of these three options changes the actual cash flows to the company. It's basically choosing the way the costs are being accounted for or reported for rate-setting purposes.

In the first option, this is the net loss that will be reported each year. After exclusion of the NAOP-related costs, this will be the net income that can be used for rate-setting purposes, allowing the board to actually be able to achieve SDR on a legal basis.

The second option is a rate ruling. A rate ruling is really an accounting treatment available only to rate-regulated monopolies whereby the board of directors can choose to include costs in rates in a different period than the costs would normally be accounted for under generally accepted accounting principles. So in this case what it would mean is that the board would charge to 1997 all the incremental costs associated with NAOP in 1997, hence excluding them from the subsequent years and allowing the net income to meet the SDR level. One thing it does is turn the retained earnings into a negative amount starting in 1997, and our understanding is that legally the board is not constrained with respect to negative retained earnings.

The third option is again applying the rate ruling, in this case to defer and amortize the costs each year over the future period. In this chart we have used a 40-year period, which enables the net income in each year because of the

deferral of costs to meet the SDR level in subsequent years. Obviously, one issue here is that with imminent industry restructuring and introduction of competition, to have a regulatory asset over a 40-year period is questionable.

In the end, there are these options that have been available and the board would need to exercise its judgement in terms of considering all the tradeoffs in terms of what is the appropriate course of action.

We've talked about the SDR issue, which is relevant under the current monopoly regime and under the current PCA. Another dimension to look at is really the issue of stranded debt. Stranded debt is really costs which are not recoverable or debt that cannot be serviced under market prices when there is a transition from the monopoly regime to a competitive market. There is definitely a very high degree of uncertainty surrounding any estimate of stranded cost simply because it's so much dependent on market prices, and market prices are so much dependent on a myriad of factors, be it the industry structure, be it the market, be it the timing, be it the amount of capacity surplus that's expected, be it fuel prices. IIPA have identified that significantly greater expenditures would be needed to address the nuclear issue and the significantly greater expenditures would potentially increase stranding. On the other hand, though, there is that improved long-term expected nuclear performance which provides some mitigation to the level of stranding that will be there as a result of the market opening up.

Last, but not least, I want to quickly cover off some of the ongoing review processes in place, given the significance and magnitude and the impact of the NAOP and the related actions. One of the starting bases is the independent financial review that has been done by our external and internal auditors. The auditors reported their recommendations to our board of directors in September, and you have all got a copy of that.

A number of actions are currently ongoing and initiated to address these actions. Some have been completed, such as the documentation of the range of options, and some are still ongoing. Also, internally, there's a lot of work ongoing at this juncture to further flesh out the costs and the plans as part of the business planning process which will be brought forward to the board in December for approval in January 1998.

The monitoring and reporting processes are currently being established as well. That would include a process to control the ongoing release of funds, subject to business pace, as well as regular reporting of status and monitoring of status in order to make sure NAOP stays on track.

This concludes my presentation. Eleanor and I would be happy to answer any questions.

**1000**

**The Chair:** Anything else to add to this, Ms Clitheroe, before we begin the round of questions?

**Ms Eleanor Clitheroe:** No. I'll just take any questions the committee might have.

**The Chair:** We will begin the questioning with Mr Conway.



**Mr Conway:** Let me begin with you, Ms Clitheroe. What is the operating assumption at corporate head office these days? Do you or do you not believe that you have an obligation to meet your statutory debt retirement obligations?

**Ms Clitheroe:** As Ms Ng pointed out in her presentation, there is an obligation to meet the SDR requirements of the Power Corporation Act. The methodology in which those SDR requirements can be met is under consideration by the board, and that decision hasn't been taken yet.

**Mr Conway:** But it is clear the assumption is that you have an obligation to meet the statutory debt retirement obligations as set out in the Power Corporation Act?

**Ms Clitheroe:** It's the operating assumption that the provisions of the Power Corporation Act govern the corporation and that the board is obliged to —

**Mr Conway:** No, listen. I'm getting very testy here because this is a remarkable presentation at one level. It's more theological than anything else. I want to get down to basics. The basic view of corporate head office is that the Power Corporation Act obligates you to meet on an annual basis a statutory debt retirement obligation, yes or no?

**Ms Clitheroe:** Yes, the obligation is to meet the Power Corporation Act requirements around the SDR. The methodology that the board is going to adopt to meet those requirements has not yet been established.

**Mr Conway:** But the methodology surely cannot subvert the first principle, which is that there is a statutory debt retirement obligation as set out in the act that must be met.

**Ms Clitheroe:** The methodology is not to subvert the Power Corporation Act; the methodology is to implement the requirements of the Power Corporation Act.

**Mr Conway:** That's helpful.

This is an open question and I don't really care who answers it. I would certainly like to have staff weigh in, because I'm not expert in this. The way I read the data, particularly from page 15 on, the financial outlook risks, if I look at your chart on page 17, the financial outlook, that and subsequent charts, Ms Ng, through the years 1998, 1999, 2000 and 2001, Ontario Hydro will be reporting negative income.

**Ms Ng:** It will be reporting negative net income if the board does not choose to adopt alternatives 2 and 3. If they choose to adopt alternatives 2 and 3, by virtue of bringing the cost forward to 1997 or deferring it to future periods, they will be reporting a positive net income.

**Mr Conway:** I think somebody over the way said that's just a shell game. This is where I'd be happy to have counsel or someone weigh in, because I just feel like I'm being had here. This is just not very satisfactory. You give me the impression that you're bankrupt. This basically makes me believe that Ontario Hydro over the next few years is bankrupt. You've got more debt than you've got income and you've got no ability, without the most bizarre financial chicanery, to meet your statutory debt retirement obligations. You're bankrupt, you can't service your debt, you're going to be hit with industry restructuring and you're hoping, according to this, that options 2

or 3 are going to allow you — I don't quite frankly understand how they're going to work. Maybe you could help me with that.

You've got three options, and I notice you begin the options by saying, "In the absence of a rate increase...." Well, the government has said there's going to be no rate increase, so let's get that off the table. Your three options are: You're going to exclude this multibillion-dollar recovery plan from the picture — that in itself is positively breathtaking, but that's apparently what option 1 is; option 2 is to apply the rate ruling to accrue the NAOB-related costs in 1997; option 3 is to somehow string it all out over a 30- or 40-year period. Is that what you're telling me in option 3?

**Ms Ng:** Option 3 is a deferral and amortization over a 40-year period.

**Mr Conway:** An awful lot of corporations would love to have that as an option they could put on the table under these conditions.

**Ms Ng:** I think I did mention that the rate ruling is only an option that's available to regulated monopolies, and I did raise the issue of the questionable period of amortization given the imminent industry restructuring.

**Mr Conway:** Explain option 2 to me again, "Apply the rate ruling to accrue the NAOB-related costs in 1997." Explain that in layperson's terms.

**Ms Ng:** It's basically saying that there are incremental costs from NAOB that have been identified for the subsequent years. The board, under a rate ruling, can choose to accrue those costs and provide for them in 1997. So it's basically taking these incremental costs and recognizing them in 1997.

**Mr Conway:** If I look at these charts, pardon me, I just look at this and say: "You're broke. You're bankrupt." You don't have enough incoming revenue to meet your expenses, including your statutory debt retirement obligation, and you're not easily going to have that over the next three or four years.

**Ms Ng:** I think if you look at the operating statement, yes, without any rate rulings, there is going to be a net loss over the next few years. Equity remains positive during that period. The other thing is that in terms of cash flows, in terms of the cash flows to service business requirements as well as the debt obligations, there are sufficient cash flows generated when we go through the debt outstanding chart, when we go through the internally generated cash flows.

**Mr Conway:** But that's only with the depreciation allowances that you talked about earlier.

**Ms Ng:** But the fact of the matter is that there are sufficient cash flows and there is positive equity. I agree absolutely with you: This is not a very favourable set of financials at all.

**Mr Conway:** I'm trying to imagine even your equity situation, because we're heading into a competitive market in the next six to 18 months and I've got to believe that once we get into that, the equity situation of Ontario Hydro is going to be affected to some degree. Would that be a reasonable assumption?

**Ms Ng:** Yes. I think all the numbers that you've seen are prepared under the current regime and under the PCA. Pretty clearly, with the imminent industry restructuring, the whole issue about stranded debt and financial restructuring has got to be part and parcel of the whole discussion.

**Mr Monte Kwinter (Wilson Heights):** I just want to pick up on Mr Conway's comments. One of the problems I have is that Ontario Hydro is using an assumption that may not be accurate. You're saying all of these assumptions are based on a regulated monopoly. If with, let's say, the white paper, or whatever happens, we're into a new regime, none of these assumptions apply. Notwithstanding that, you are making commitments based on the old assumptions when we are on the threshold of new assumptions.

It would seem to me that something doesn't ring true here. We have been told that all of the nuclear reactors are safe, we have been told anecdotally that even at Bruce and Pickering we could still go on for a number of years without any significant problems, and somehow there is this rush to judgement. There is this rush to commit to this particular program when all of these things are happening or are going to be imminently happening.

Why was there this great rush and why would the board of Ontario Hydro not get all of the information you've identified as the risk factors before they make their decision? What you have said, I assume, in your presentation to the board, is, "Here are some of the things that are at risk and they're very significant." If any one or more of them should happen, what you have described as a very bad situation would be catastrophic, yet the board has said, "Well, we will approve it; we will monitor as we go along," but they're making their decision on assumptions that any reasonable person would look at and say are not likely to be. Do you have any reaction to that?

1010

**Ms Clitheroe:** Perhaps I can answer, Mr Kwinter. With respect to the regulated monopoly assumption, it is correct that the board must, while the Power Corporation Act is in existence, operate as a regulated monopoly. We are, as are other industry participants, expecting some form of industry restructuring through the white paper or others. We note that the white paper is in fact referenced in your own terms of reference for the committee, so we do expect to see some sort of industry restructuring. But until that industry restructuring takes place and the new rules are outlined, the new assumptions, if you will, are incorporated into legislation which would govern Ontario Hydro, the board can only operate under the assumptions that it currently has or under the rules that it currently has under the Power Corporation Act.

It does raise difficulties for the board in reviewing material, in making decisions around a time when it becomes evident that there's going to be substantial change, but it doesn't obviate its requirements to operate under that piece of legislation and operate as a regulated monopoly until it can do otherwise.

With respect to your comment about the rush to commit to judgement, I'm assuming what you mean there is the rush to take a planning decision to bring the nuclear reactors up to world-class standards. Am I correct in assuming that's what you meant by that comment? Yes.

The board had been reviewing material starting in 1996 with respect to the performance of the nuclear reactors and had begun a program, for which it had taken a provision the prior year, to bring those nuclear reactors up to standard. As it reviewed the program through the fall of last year it became apparent that the pace at which the issues around the reactors were being corrected was not fast enough to satisfy itself that the turnaround of the nuclear recovery was going to take place as it had expected.

Because of that, the board began its search for what turned out to be Mr Andognini and his team. Mr Andognini began in January 1997; most of the team I think was in place by February and March. Mr Andognini began to make reports to the board beginning at the front end of 1997, obviously, originally quite preliminary reports as he began to do the IIPA and to uncover material, and perhaps more in depth to the nuclear committee of the board, but certainly a monthly report to the board on his findings. Each month's findings built on the previous month's findings, so the board was not unfamiliar with Mr Andognini's view of the extent of the nuclear problems he was uncovering.

What had not been discussed in Mr Andognini's report, because he had not yet formulated a plan, was Mr Andognini's proposal for how to address those problems and how to recover the 19 nuclear units. He had been investigating both the technical and the management and other issues, some of which, by the time his report was prepared in July and was presented to the board in August, he had reported on to the board; some of which he had reported on that he had not been able to completely uncover all of the issues associated with them; some of the problems he'd merely identified that there may be something further to look at, so that he identified there was further work to be done.

When the board received Mr Andognini's report in August, the August 12 board meeting, they weren't coming at it from the point of view of saying this is something that he had sprung on them, that they had not been aware of. In fact, the reason they brought in the team was because they had been aware of the issues and had been wanting the team to get to the extent and magnitude of the issues and hear his proposal for turning those issues around.

The report went to the board to advise the board of Mr Andognini's findings and the proposal he had for recovery, during which meeting, you're quite correct in saying, not only did Mr Andognini and his team and the generation group present the issues around the recovery, but we also presented very similar information to what you have just seen with respect to the potential financial impacts of the recovery, with the commentary that there were risks around that as well as that there was a lot more work to be



done to dig into the financial issues raised in particular by this report.

The board at that time decided that for planning purposes we should proceed on the basis, as we moved into the 1998-2000 planning period, that Mr Andognini's report would be adopted and that we should be planning around doing the work around coming back with the further analysis around that plan. So for purposes of our going forward as management, we were to plan to implement that, to bring that forward in the 1998 business plan.

The comment that you make around the rush to commit I think doesn't put in full context the amount of time the board had spent leading up to that date and the amount of time it expected to be spending post-August 12 in reviewing and implementing the proposed nuclear plan.

**The Chair:** That wasn't a particularly helpful answer for me, Mr Kwinter, but it may be for you. I want to move on to Mr Laughren.

**Mr Laughren:** As someone who has been a strong proponent of public power at cost as long as I can remember, I'm troubled by what I see unfolding before us. Believe me, I don't get any satisfaction out of it.

Am I right in saying that if you exclude the NAOP costs from the numbers, if you will, that's almost like building a new plant and not allowing the cost of that new plant to be brought into the rates until it starts feeding into the system, the way Darlington was built and not charged into the rates until it started supplying power? Is that an analogy that's appropriate?

**Ms Clitheroe:** One of the options that Ms Ng had in her presentation was the accrue and amortize. That would be similar, I guess, in terms of the capitalization and amortization. In the case of the plant, of course, you don't begin the amortization until you actually bring the plant into service.

**Mr Laughren:** So there is a similarity there. It's pushing what you have to do now off into the future in terms of it being reflected in the rates, is it not?

**Ms Clitheroe:** Yes, that's correct.

**Mr Laughren:** In a sense, it's buying time because of a government directive that there be no rate increases, because it seems to me that as financial persons, if you had your druthers, you would reflect the NAOP costs in the rates as those NAOP costs are incurred. Is that correct?

**Ms Clitheroe:** As a financial person, I'm always interested to see a more attractive balance sheet and income statement than what is portrayed here in this material. On the other hand, as a financial persons, I also have to take into account the circumstances in which such a rate increase might take place. So the financial statements are only one aspect of what would precipitate a rate increase.

**Mr Laughren:** Do you think that what you're contemplating doing in order to meet the requirements of the Power Corporation Act vis-à-vis the statutory debt requirement — and this is a tough question for you perhaps, but do you think that the options you're considering in that regard are in keeping with the spirit and intent of the Power Corporation Act concerning the debt?

**Ms Clitheroe:** Yes, I do. The Power Corporation Act has to be taken in its entirety, and the powers of the board in terms of its ability to accrue and amortize or to take a rate ruling are all part of what was anticipated in managing the financial condition of the company. So I do. Clearly there are several alternatives that the board has to face and weigh all the factors in making that particular decision.

In the light of the government policy on no rate increase, in the light of the fact that there is a monopoly in place and that the rate guarantee of the government is in place, I think all of those options are available to the board.

**1020**

**Mr Laughren:** I guess this isn't the first time we disagree on a financial matter. It seems to me that this really does subvert the spirit and intent of the Power Corporation Act vis-à-vis debt retirement. When I think about that, I remember thinking about it in another light as well, that this really does violate it, but that's my opinion on it.

Could I ask you about the options that are now before us and you, basically because of the decisions you've already made as a board. Please permit me to be hypothetical for a moment. If the Hydro board had decided not to proceed with the nuclear recovery plan, the set of numbers that Ms Ng showed us this morning, with the permanent loss of revenue from Bruce A and Pickering A — let me use both of them for the moment — the set of numbers that we've been debating here this morning would be substantially different, would they not?

**Ms Clitheroe:** I guess that is a subject of debate. The original business plan had the original recovery program built into it, with the provision that had been taken in 1996. The expectations were that the recovery program was going to be effective and that you would get the production levels out of the nuclear plants that the plan incorporated. Given that the board and management felt that the recovery program was not effective, it is highly unlikely that had we continued to proceed, we'd actually get the production out of the nuclear plants. Had we not adopted the plan, would things have unfolded as we expected under the business plan? I expect not. We perhaps would not have been in a position to plan for them not unfolding that way had we not recognized it, but I would think it is unlikely that they would have proceeded on the original plan.

**Mr Laughren:** The point I'm trying to get at, and I hope it's not too circuitous, is that I wonder if the board had many options. If it was going to come to a point of actually being able to, in whatever fashion, meet its obligations under the Power Corporation Act vis-à-vis debt retirement, if you had put numbers up there on that screen that showed you with a substantial drop in revenue because of competition coming in and the energy not being generated by Ontario Hydro but by gas-fired turbines etc plugging into the grid, if that had been the case, I wonder how much worse those numbers would have been that we'd be debating this morning, because it seems to me that you desperately need those revenues that are on those slides. I think among us there's a lot of scepticism that

even if you proceed with this recovery plan, you're not going to get those revenues. If you had not proceeded with this plan, the revenues would have been even less, so I am really sceptical about the assumptions built into your revenues on these slides.

**Ms Clitheroe:** Your scepticism is driven off of the notion that the industry will open up, that there will be competitive forces and that Hydro's generation would not be attractive in that market.

**Mr Laughren:** That's right.

**Ms Clitheroe:** The business plan that we had put forward, the one that you're seeing as the baseline in those slides, when we put that forward to the board, we indicated that we were not taking into account a loss of the monopoly in that plan. We recognized that there was a potential loss of the monopoly if the government took action to change the policy around industry, but we did not build into the plan a loss of revenue as a result of loss of the monopoly.

Leaving aside NAOP, if we were to lose the monopoly, we had discussed internally that we felt we would lose some of our higher-cost generation in competition with generation being brought in from other provinces or from the United States. That primarily would have been probably our fossil plants, which would not have been as competitive in some circumstances; less likely that it would have been a hydro-electric or nuclear on the margin, ie, running the operating costs of running the plant.

We had a concern around that drop in revenue, and that was as a result of losing the monopoly, if that were to occur. That was part of what was driving the restructuring from 1993 onward, to try to put the company into a more competitive mindset and into a more competitive cost structure with a view to thinking that it would eventually occur, that as the North American industry restructured, so would ours in Ontario.

**Mr John O'Toole (Durham East):** Thank you very much for appearing before us before; there were a number of good questions. You mentioned, Ms Clitheroe, as a professional accountant or as an expert in that area, you'd like to see a little more black ink. Do you support the NAOP plan?

**Ms Clitheroe:** From the point of view of bringing the nuclear units into a higher productivity, I certainly support the nuclear plan. As it stands, the production from the nuclear reactors on the margin is the cheapest electricity that can be generated in Ontario, and the more production we can get out of those existing plants the more favourable our income statement is going to be.

**Mr O'Toole:** Just on that, on a very simple level, what is the cost of nuclear power? I'm somewhat confused with respect to full-cost accounting. You say that's your qualifications. Are the accounting costs real, all on the table, and what is the cost per kilowatt? We can clearly say three and five cents for other forms of power. What is nuclear?

**Ms Clitheroe:** If I can just differentiate what you had said there in terms of full-cost accounting and marginal

accounting, which I had been referring to in my previous —

**Mr O'Toole:** All the private companies are full-cost accounting. Your competition is using real accounting methodology as opposed to "throw it in the debt basket."

**Ms Clitheroe:** As do we. The issue would be, given that we have plant built and our competition has plant built, whose production would be the cheapest. So if you think of the existing plant as already built and sunk costs, how much does it cost you to run that plant would be the way people would make a decision about what power was cheapest. If we could run our nuclear plants on the margin at two cents and somebody could only run theirs at three cents, we would run ours and take the additional income that would bring us. A different decision would be taken if you were building new plant, and that's where your comment about full-cost accounting would be.

**Mr O'Toole:** I have some problems. If you look through your statements here, statement 19 tells you that you're overbuilt, your assets are basically — you've got to write off about \$15 billion to be equal. So you've got a lot of baggage in the rates that doesn't show in the rates. I don't believe the two or three cents; I think it's more like six cents in nuclear. If you had to really be competitive, you wouldn't be competitive. I'm referring to the Ernst and Young report as well. They question very seriously some of the underlying assumptions. You're aware of that. I'm sure you've read it in detail, in probably more detail than we have.

One of the factors that I question is the aging factor. All this stuff is predicated on a 40-year lifespan. What, in your view or your expertise, is the anticipated plan for writing off these assets, and are they real? What's the number? It sounds to me like they're only going to be half the life.

**Ms Clitheroe:** The question is, what is our plan for writing off the assets?

**Mr O'Toole:** What is the life of a nuclear plant?

**Ms Clitheroe:** The current assumption on the life of the nuclear plants continues to be 40 years. Some of those are obviously into their life and so don't have an additional 40-year life.

**Mr O'Toole:** It sounds like two of them are done and they're not 40 years.

**Ms Clitheroe:** Two of them are the ones that are in question. When Ms Ng put up the slide that indicated the two options, Pickering A and Bruce A units' return, she noted that there would be some construction work in progress that would have to be written off, in and around the \$300-million mark, as a result of the lay-up time frame. But with respect to Pickering A and Bruce A not being brought back, if they are not brought back, then the write-off of those units would be the noted figure there of \$3.4 billion.

**1030**

**Mr O'Toole:** Even the \$3.4 billion isn't full either because really you have to greenfield that site. The decommissioning costs, I think the assumptions there are seriously suspect. I'm not an expert, but there have been



people here who suggest that maybe those have been also numbers — how much debt will be outstanding when the nuclear reactors have completed their useful life? In other words, you've paid for a plant — probably the case could be made you overpaid — you've used the wrong calculations for depreciation and there's going to be an amount of the debt left at the time of its useful ability to generate revenue. How much debt is going to be left when Bruce A and Pickering A are terminated?

**Ms Clitheroe:** The remaining book cost of those plants combined is the \$3.4 billion that I've just referenced you to.

**Mr O'Toole:** We'll take that as weighted. Just in the purely financial realm, not to be too harsh but very specifically with the showing of negative retained earnings and a questionable debt-equity ratio, all the underlying fundamentals aren't there, period. If you were trading on the market, you'd have a lot of trouble. Are there any control mechanisms in place to require Ontario Hydro to get provincial government approvals at certain phases of financial — or bonds? Are there formal processes where the province actually has the ability to say yes or no?

**Ms Clitheroe:** Yes. All of the debt of Ontario Hydro is government-guaranteed and that guarantee stretches back a long way; I think it probably has always been in place. So at the time that bond issues are raised, the government must approve those bond issues by providing the guarantee.

**Mr O'Toole:** Without the government's guarantee, would you be able to float your bonds? If the government wasn't fundamentally underwriting your debt, would you be a viable entity? Is it not, first, the government's inability to really bring to bear its concerns and yet it's the government's ability to underwrite all this debt that keeps you solvent? Isn't there a problem there?

I'm not trying to be hard-nosed here. I just think that we represent basically the people of Ontario. They're saying that it's \$30 billion now in debt. This plan will put them \$40 billion in debt. The plants will be finished; by the time you get those plans all implemented, you'll be closing half your assets. The others will also be aging. We're going to end up with \$50 billion and be right back here in another decade saying: "What's happened? It's now \$64 billion." That's the direction that all of the underlying things tell me. I think you would have to deal with this more seriously if in fact the government wasn't there underwriting and the people of Ontario assuming this debt. I want you to answer it in this respect: How and who in an unregulated market should be paying that money back? Who should be paying it back to whoever we owe it to?

**Ms Clitheroe:** You've asked a number of questions there.

**Mr O'Toole:** Yes. There are two main ones, though.

**Ms Clitheroe:** Could we float our debt without the government guarantee? Of course we don't know that because we have never attempted to do that. However, we have been advised in the past that we could. Whether that is accurate or not, I don't know, and we certainly haven't

pursued it because it hasn't been an option that's on the table.

With respect to the question of solvency, I'd like to come back to that because the cash-flow chart that Ms Ng put up indicates that we have sufficient cash to pay the debt and to pay the bills, so there isn't a cash solvency issue. I'm not denying that the financial statements are unattractive, but there isn't a solvency issue.

With respect to the issue of the debt and the expectation of where the debt would go to, the expectation that we had under the base plan that was outlined to you this morning was that we would be able to bring the debt down by \$6 billion to \$7 billion over the next number of years. The expectation now is that we'll be unable to do that, but that we'll be diverting that cash that was to pay off that debt for the NAOP. It is not expected that we would be bringing the cash requirements up over that level at this time.

With respect to your last question, in an unregulated market who should be paying for the debt, I guess there are a couple of answers. In the event that none of the assets were stranded assets, the debt would be paid off in the normal course through the energy prices, as it is today. In the event that there were assets that were stranded under the new rules that the government would put out, then there are a variety of mechanisms that different jurisdictions have used. They range from transition charge to transmission charges, debt equity swaps. There's a range of ways that it has been done, and that would be a government policy issue which I'm not qualified to comment on.

**Mr Conway:** Ms Ng, I want to go back to your paper, Corporate Financial Implications and Issues. On page 4, 1997-99 business plan assumptions, the first line of that, the Canadian dollar relative to the US dollar, 1997, your planning assumption for 1997 is the Canadian dollar will be 74.1 against the American dollar.

**Ms Ng:** That's correct.

**Mr Conway:** It's November 4, 1997. I went out yesterday to look at buying some American money and I'll tell you it wasn't being quoted as 74.1. In fact, it was down around 71 something.

**Ms Ng:** Yes. I mentioned to you that this is the business plan that was developed last year and we're using this to identify the incremental impact of NAOP. Essentially the new business plan is being prepared right now and —

**Mr Conway:** But my point is, this is what we've got in front of us and I look at that and say, and you heard Mr O'Toole and others here say, we don't have a great deal of confidence in the planning assumptions at Ontario Hydro. We're not alone. Ernst and Young has tabled a report in which they raise many serious questions about the assumptions, financial and otherwise. I see on the first page of your document assumptions around the Canadian dollar and they don't look anywhere near reality. They're not real for 1997. How you get to 1999 with the Canadian dollar estimated to be 77.8 cents relative to the American dollar seems to be extremely optimistic.

**Ms Ng:** At the time when the forecast was put together late last year, the process we had was to look at all the major forecasters. We consulted with DRI, who actually provide us with all the economics forecasts. It's something that we buy rather than make ourselves.

**Mr Conway:** But you would agree that this does not appear to be a very realistic assumption for 1997?

**Ms Ng:** The only thing I can say is that this forecast was already lower than any other forecasts that were on the table last year from all the other forecasters.

**Mr Conway:** I accept that, but the reality for 1997 seems to be markedly different. I'm now looking at a recovery plan that makes a whole series of very dubious assumptions and we're right at the margin. We're at the margin everywhere. So I wonder what the implications of, for example, something as basic as your Canadian dollar assumption mean for this plan.

**Ms Ng:** The only thing I can say is that we're probably as wrong as others, probably less wrong than all the others.

**Mr Conway:** But not very many of the others are faced with the financial crises that Ontario Hydro appears to face.

**Ms Ng:** The other thing I should let you know too is, we actually made a prudent adjustment to the forecast that we got from DRI and we also built in a \$100-million contingency in 1997, \$200 million in 1998, and in 1999 we built in \$300 million. So from a planning perspective, I try to use the best information that's available at the time.

**Mr Conway:** That may be very well and good, but all I know is that we've got what we've got in front of us. That's the first thing that jumped out at me when you started through your slides and I thought, "Where are those assumptions coming from?" You tell me you bought them from DRI. That's well and good, but they don't appear to be very realistic for 1997.

**Ms Ng:** We not only buy it; we also have an economic advisory group that includes a number of major forecasters from investment houses and banks. We take their number and make sure that we pick something that's absolutely more conservative than any of the ones that are on the table.

**Mr Conway:** I guess it would give me more comfort if I saw a 1997 and 1998 number that was a lot closer to reality than the numbers presented to me here today.

**Ms Ng:** I'm not sure that maybe we can further increase the prudence by, instead of adjusting it down — like this year we have gotten a new DRI forecast and we have lowered it by two cents in order to build in that prudence. You have to rely on the best information and the best expertise at the time.

1040

**Mr Conway:** I want to come back to a couple of other questions around assumptions. First of all, how much of the current Ontario Hydro debt attaches to the nuclear assets?

**Ms Ng:** We don't actually allocate the debt by units per se in terms of —

**Mr Conway:** Give me an approximate figure then.

**Ms Ng:** I think if you're looking at the book value of nuclear, it's somewhere over \$20 billion. I would suspect that if you want to do some kind of an allocation, that may be an approximate sense.

**Mr Conway:** So approximately two thirds of Ontario Hydro's existing debt attaches to nuclear assets. I just want to get a ballpark number.

**Ms Ng:** Like I said, we don't allocate it, but I can tell you the book value of the nuclear, and if you can associate the debt and equity to it, that may be something like what you've just said.

**Mr Conway:** I'd like a written response to the committee as best you can give it on that question: How much of Ontario Hydro's existing debt attaches to nuclear assets?

**Ms Ng:** one of the questions I have again — you know, it is absolutely clear to anyone that we're on the brink of major change in the electricity sector. What I want to know is, has anybody in your office run a model of what the competitive environment is going to mean for Ontario Hydro's financial situation? Has that modelling been done?

**Ms Ng:** We have definitely looked at some of the hypothetical scenarios, and that formed the basis of the disclosure we had in the 1996 annual report whereby we talked about the introduction of competition and some of the potential implications. Basically, whatever internal analysis that was done formed the basis of the information that's in there. I think Mr O'Toole just now was talking about note 19 and that's essentially what I'm referring to.

**Mr Conway:** I look at the Ernst and Young report and there's a whole series of questions around not only what is but what's about to happen. I find it incomprehensible that the staff would give to the board for August 12 a multibillion-dollar recovery plan that doesn't appear on the face of it, and I suspect there was a lot more going on at that board meeting than we'll ever know, but there does not appear to be a great deal of workup about the implications of a competitive market, particularly around a lot of the costing and other assumptions that went into the so-called nuclear recovery plan.

**Ms Ng:** As Ms Clitheroe has just indicated, until the government puts forward its policy decisions in terms of what would happen in terms of the industry restructuring, the board is operating under their obligation under the current PCA and the current regulatory regime, and that's essentially what the information is based on.

**Mr Conway:** That's unbelievable. You're committing the taxpayers of Ontario, the ratepayers of Ontario Hydro, to a 10-year multibillion-dollar recovery plan, the out years of which I think are 2007, 2008, if you look at the potential pullback of the Bruce plant. We know, all of us, that before the decade ends, we're going to be in a very different kind of electricity market. It just doesn't seem possible to me that people who have your kind of credentials and your kind of experience would give to the board submissions that didn't in a very real and meaningful way take that into account, because I've got to believe that



competitive marketplace is going to produce a totally different kind of analysis of many of your assumptions.

**Ms Ng:** As I said, that analysis was the basis for note 19, but for the purposes of this under the board's current obligations, I'm not sure whether Hydro can design its own different obligations without the government providing that context.

**Mr Conway:** Ms Clitheroe, are you a voting member of the Hydro board?

**Ms Clitheroe:** Yes, I am.

**Mr Conway:** Did you vote on August 12 for this so-called recovery plan?

**Ms Clitheroe:** Yes, I did.

**Mr Conway:** You did and you were comfortable enough with the financial data at that time to endorse this plan?

**Ms Clitheroe:** I was comfortable to endorse the plan from planning purposes, as is indicated in the resolution that was passed by the board. In the last two paragraphs of the board resolution you'll note that there was a direction to bring back additional financial material and analysis and to bring back information on the Bruce A and Pickering A, and with those two paragraphs I was comfortable.

**Mr Conway:** Staff can help me. When did Hydro release its second-quarter report?

**Mr Richard Campbell:** September.

**Mr Conway:** In September. The second-quarter report, which presumably is your handiwork, Ms Clitheroe, went out to the markets with some very interesting information. Your second-quarter 1997 report suggests that beyond all of this, there could be asset write-offs of an additional \$2 billion, that there were other reviews taking place of the non-nuclear facilities, to which Ms Ng made some reference earlier, and that these charges and changes could produce a significant deterioration from the previously planned financial performance over the 1998-2001 period. I'm just quoting from the second-quarter report of Ontario Hydro.

How is it that somebody in your position can be associated with this when not only are people like Ernst and Young saying there are all kinds of unanswered questions, all kinds of questionable assumptions in the NAOP, but your own second-quarter report indicates that the NAOP is only part of the story? If you weren't bankrupt or nearly bankrupt at the NAOP stage, if I read your second-quarter 1997 report, I've got to believe you're surely insolvent at that point, and all of this on the verge of a government paper that we hear the other day may in fact start the disaggregation of Ontario Hydro. If I'm an Ontario Hydro bondholder living in Bond Head, Ontario, I must be wondering: "What do I own? What are Ms Clitheroe and her friends setting me up for?"

**Ms Clitheroe:** Is that the question?

**Mr Conway:** The question is, I want to know more about —

*Interjection.*

**Mr Conway:** I wish I could be more pointed, but I'm telling you, the information is —

**The Chair:** I think your question was very clear, Mr Conway.

**Mr Conway:** Your comfort level as the senior financial officer at this corporation, not only at August 12, where you get after just a few days a recovery plan that commits the taxpayer and the ratepayer to billions of dollars of additional unplanned-for expenses and, not only that, you're in the process of preparing a second-quarter report to the market which arrives late August, early September saying: "And that's not all. We've got more write-offs that we intend to make and the situation may be worse even."

**Ms Clitheroe:** The second-quarter report was published at the same time as the NAOP was announced, so that material was in the public sector at the same time. In the interviews that I had, particularly with the press or with the investors, that second-quarter report was discussed along with the implications of the NAOP. The issue of disclosure, I think, was covered and handled, and the contents of the second-quarter report were known to the board at the same time.

**Mr Conway:** But is the real issue, Ms Clitheroe, because the taxpayers guarantee this debt, there really isn't anybody over there at Ontario Hydro worried too much at the end of the day, because at the end of the day the bills come over here? They're guaranteed by Her Majesty.

**Ms Clitheroe:** I think it is inaccurate to say that there is no one at Ontario Hydro worrying about the financial conditions. Certainly the board does, I do and the management does worry about the financial condition of Ontario Hydro.

With respect to the comment about insolvency, I guess I need to repeat that again. The projections that we have in front of us are not dealing with an issue for Ontario Hydro to have sufficient cash to meet its obligations. The chart that is in front of you indicates that we had planned to pay off debt, but that the cash that was there is to be diverted to pay for —

**Mr Conway:** But the chart I have in front of me tells me that through 1999-2000 you are insolvent and the only way you're going to keep your head above water is to use measures that no other corporation in the country would be able to use.

**The Chair:** Thank you, Mr Conway. We'll go to Mr Laughren.

**Mr Laughren:** Would you like to use some of my time to respond to that?

**The Chair:** No, I'll take it off the next time around.

**Mr Laughren:** Are you going to respond to that?

**Ms Clitheroe:** Could you repeat the portion?

**Mr Laughren:** Do you want to respond to that now? I don't mind if you do.

**Ms Clitheroe:** Okay. The issue of the ability of the company to meet its obligations and have sufficient cash to meet its obligations is one issue, and that issue, what you're seeing from the financial material in front of you, is that there is sufficient cash to meet obligations. The other issue which we're confronting as a corporation and which you have in the material in front of you is the accounting

treatment on the balance sheet in terms of the write-offs issue, if taking write-offs will then result in impairing the retained earnings, ie, going "negative" or, over a period of time if it's done year over year, that they would be reduced. But that does not result in an insolvent situation; it results in the accounting costs of a NAOP program drawn from the equity of the corporation. That is not a cash situation; that is an accounting treatment. The cash itself remains and the cash outlay is sufficient to meet the obligations of the company in the plan you see in front of you.

**1050**

**Mr Laughren:** Thank you. I wanted to return to the decision the board made on the recovery plan. We were told that the whole issue of the recovery plan was put on the agenda as an information item when it was sent out to the board members. Then when the board members got to the meeting, lo and behold, it was a decision item, which is an enormous difference, it seems to me. Who would make the decision that that item would be changed from an information item to a decision item?

**Ms Clitheroe:** The change would be made by the board in discussion, and that is in fact what did happen. The presentation of materials was made by the nuclear group and I made the presentation with respect to the potential financial impacts. The discussion centred around not only the financial impacts but the technical issues that are raised by the report, the safety and licensing concerns, the risks associated with carrying on the way we were with allowing further deterioration to go on and so on. With that range of factors in place, the board decided that given the information in front of them, it was not prudent to simply receive the information and have it come back for further analysis, but that they wished to advise management that the situation was serious enough that management should take the plan as their planning document but come back with detailed information on the financials, particularly on the Bruce A and Pickering A issues.

**Mr Laughren:** Oh. Perhaps I'm alone on the committee in this regard, but I'm surprised at that response. It was my understanding that the board members were surprised when they got to the meeting to find out that was not an information item but indeed a decision-making item. I'm wrong on that?

**Ms Clitheroe:** It was an information item on the board agenda. There's always a cover sheet, if you will, on top of submissions, and the cover sheet on the submission was an advice to the board. During the course of discussion at the board meeting, the board decided that they would prefer to move it beyond an advice item to a decision-making item for planning purposes.

**Mr Laughren:** Oh. So that decision was made at the board meeting, not prior to it?

**Ms Clitheroe:** That's correct.

**Mr Laughren:** Oh, I see. Leading up to that meeting, as someone who had to make the financial presentation to the board, you must have been very much involved with the options laid out in the recovery plan. Is that right?

**Ms Clitheroe:** No, not in the technical options. The financial information was obtained from the operating

groups. We consolidated it and then translated that into, what would that mean from a corporate impact? The material we would receive from the two operating groups would deal specifically with their own fuel costs and so on. Our job was to translate it into the type of material you see here, which gives you the impact on the income statement, the cash analysis and that sort of thing. The direction we had coming out of the board was to take the information we had incorporated and then go back with Ernst and Young, with corporate finance and with the operating groups and fill out more detailed information, investigate the risks further and bring that type of information back to the board, not only on a monthly basis but to deal with it as we brought forward the 1998 plan, which would be their formal approval for the plan for the subsequent year.

**Mr Laughren:** As the chief financial honcho, if you will, at Hydro, to what extent did you feel obligated to say: "That's fine, this is all a nuclear recovery plan. There's got to be other options that we have to look at as well"? To what extent did you do that and run those numbers?

**Ms Clitheroe:** We hadn't run options. The numbers we had run were the numbers which reflected the implications of the specific proposal that Mr Andognini put forward.

**Mr Laughren:** I understand.

**Ms Clitheroe:** We did indicate that they were potential impacts and needed further investigation. We did indicate that other alternatives should be looked at, that we needed further analysis on the Bruce A-Pickering A situation, that we had to delve into the substance of these numbers to be able to give them a more accurate picture in subsequent months.

**Mr Laughren:** But the all-nuclear option, basically.

**Ms Clitheroe:** The nuclear option as opposed to?

**Mr Laughren:** As opposed to non-nuclear options; for example, shutting down the two A plants and moving into a whole new era of generation at Hydro.

**Ms Clitheroe:** We had not done that analysis but we expected that we would be doing that analysis leading up the business plan for 1998.

**Mrs Helen Johns (Huron):** I want to ask a couple of quick questions. Ms Ng, can you tell me what reserves Hydro has on their books that are allocated to nuclear asset renewal or tied to doing some work on the nuclear assets?

**Ms Ng:** You are talking about the capital expenditures as planned for nuclear?

**Mrs Johns:** And that you have a reserve for on the books.

**Ms Ng:** A reserve for on the books? Are you talking about the \$400 million that was accrued in 1996 —

**Mrs Johns:** I'm just asking to get it on the record. You tell me what reserves you have that are tied to assets and I will —

**Ms Ng:** I assume that you are talking about the \$400 million that had been accrued at the end of 1996 for nu-



clear recovery, which I think at this point in time would have to be considered together with the new NAOP plan.

**Mrs Johns:** When you are doing your accounting I assume you would be looking at what needs to be done in the future and putting reserves aside. Was there any discussion about this reserve previously and why the number would be so small when all of a sudden within five or six months you're asking us for eight billion bucks?

**Ms Ng:** On a normal accounting basis, the costs would either be expensed to operations or be capital, which would mean coming into service and the costs charged then. A reserve and an accrual needs an application of the board's rate ruling, which is essentially what was done with the \$400 million. I think the \$400 million was done at the end of last year as a result of the 1996 business plan, in which the nuclear management at the time identified the amount of expenditures that would be needed in order to bring the nuclear to a performance level. That was the amount the board had decided would be set aside and accrued using the rate ruling.

**Mrs Johns:** Because you have a lot of accounting knowledge, can you tell me if you would invest in a company that has \$600 million in retained earnings and \$34 billion in debt.

**Ms Ng:** I don't have any money to invest, so —

**Mrs Johns:** Oh, I would think you must at Ontario Hydro.

**Ms Ng:** Whether I would invest or not, I would have to look at a number of the factors, be it whether there is a regulated revenue stream and whether there is a government guarantee on the debt in terms of the bonds. There are a number of things that probably would be looked at.

**Mrs Johns:** That's exactly what I would be looking at too. I would only be looking at that government guarantee. If there was one, I would be investing, and if there wasn't one, I wouldn't be investing. I think that proves the point.

I just want to ask Ms Clitheroe a couple of questions. I want to understand why you got Ernst and Young involved and why this report came out on September 7.

**Ms Clitheroe:** Following the board meeting of August 12, we were asked by the board — and we would have done it in the normal course anyway — to bring back additional financial analysis. Because of the magnitude of the program that was being undertaken, I believed it would be prudent to bring in a third party to look with us at the implications, the risks, cost factors and that sort of thing, to identify for us areas where we should focus additional attention. They did that and then we were able to take their results and look at where we should be focusing additional attention.

1100

**Mrs Johns:** Okay. Basically, it comes out of the board meeting that you have to get additional information. I wrote to Carl Andognini a couple of weeks ago and I asked him: "You say you have no financial prowess, Mr Andognini; you say you have no fossil fuel experience. Someone must have helped you in that area." He said to me in his response that, sure, corporate finance had been working with him. There had been people assigned to him.

I wanted names but he didn't give me names. I would assume that since you are the head here, you probably know who was involved in this all the way along. You were getting direction about the NAOP process. I would assume that on August 12 or 13, this wasn't news to you specifically. Is that correct?

**Ms Clitheroe:** Yes. When Mr Andognini came in January, he asked for a small team to work with him. We provided him with a small team of a few people, one of whom is now his vice-president of finance in his operations unit. He used the small team from January to March, I believe, or April, and then appointed his own person to continue on from May to July. Currently the person is still in place.

We worked with Mr Andognini to help him understand the accounting in his unit, to get access to the information as a new individual coming in, to understand the information. So we worked along with him. We were familiar with, as it unfolded, the extent of the issues that he was addressing in his plan. Where we were not involved was in the technical side, the technical recovery side —

**Mrs Johns:** Of course not. It's not your side. I understand that.

**Ms Clitheroe:** — and we were not involved in the proposal on how he felt that the recovery should take place, ie, were there sufficient resources to do X, Y or Z?

**Mrs Johns:** Were you at the management team meeting in Orangeville where they discussed the NAOP and put dollars to it and brought all this information together? I think it happened much earlier than August.

**Ms Clitheroe:** No, I was not.

**Mrs Johns:** Was anybody from your staff there?

**Ms Clitheroe:** I don't believe there were, just Mr Chopra, who is currently his vice-president of finance.

**Mrs Johns:** Okay. Did Mr Chopra work for you at that point?

**Ms Clitheroe:** Late July? No. At that point, Mr Chopra would be working for Mr Andognini.

**Mrs Johns:** Excuse me about this, but how do you know about this NAOP policy if you weren't at that meeting, you have nobody working for you who's tied to it? It just comes to you with a premonition?

**Ms Clitheroe:** No. Mr Chopra would work with our group in providing the information that we would then consolidate.

**Mrs Johns:** There was a flow from Mr Chopra to you, so you were kept informed the whole time along about the NAOP process and what they were doing.

**Ms Clitheroe:** About the specific financial issues.

**Mrs Johns:** Exactly. I'm only talking about financial issues. I assume that you don't know anything about how to run a nuclear reactor. I assume that. From that standpoint you understand all this information all the way along from the financial perspective, because they start to build this information as they're going along through the process because Mr Chopra is there from very early on in the process. You don't think to bring somebody else in all the way along the process? You get this approved by the

board first and then you say, "Oh, by the way, maybe we should get some third-person advice on this."

**Ms Clitheroe:** Typically, the type of financial prudence review that we had done by Ernst and Young would be done in a private sector setting. It would be done at the point that a utility was going forward to have its costs incorporated into its rate base. Typically, these costs would be reviewed in this manner, after the fact, after the plants were built. There would then be an intensive prudence review at that stage. Although we had not done it before, what we decided to do under these circumstances of such a large program was to take that concept of doing that type of prudence review that is typically done much later on in the process and accelerate it and do it at the front end of the process so that we would have that additional information up front.

**Mrs Johns:** What disturbs me about that is — as a board member too, and as chief financial officers — you're there to give the board direction and advice on what is a good and prudent method. They depend on you for advice. Board members are there to take information from the senior management, to process that information and to come back with good solutions. I think the board members, especially Bullock who was here, believe that they get good information from the managers. I don't think that we're to believe they're getting good information from the managers.

For example, in the Ernst and Young study, how can management or the board make a decision when there is \$158 million that was incorrectly put through the books by the corporate finance presentation as a result of insufficient communication between departments? Do you feel in any way liable for that?

**Ms Clitheroe:** The decision that the board took on August 12 was not a financial decision. They explicitly indicated that they did not take the financial decision, that they wanted additional financial material brought to them. They did not make any financial releases and neither were financial releases requested.

When we, as corporate finance, with the operating teams, brought the information forward, there was not a request for financial approvals. In fact, we indicated that we thought there was insufficient information to make decisions on financial approvals and financial releases and that further information had to be brought back. The decision that was taken was made on the basis of the technical information that was brought forward by Mr Andognini and his team on the condition of the plans —

**Mrs Johns:** I disagree with that.

**Ms Clitheroe:** — for planning purposes.

**Mrs Johns:** You mean they didn't consider the \$8 billion? If it was \$60 billion, they would have said, "Sure, go ahead," or if it was \$8 billion or \$2 billion? The dollars never came into effect at that meeting? I don't think so.

**Ms Clitheroe:** No. We made a presentation giving them the range of what we thought it was going to cost to implement the specific proposal that was in front of them. We also gave them an indication of the range if the Bruce A and Pickering A plants did not come back. But that was

really a range provided to them to give them an indication of the magnitude of the program in front of them. It wasn't a request for release of funds and it wasn't expected to be an approval of the financial plan. The approval of the financial plan for the program is yet to be done and is intended to be done through the business planning process for 1998.

**Mrs Johns:** Just two quick questions: I'll answer the first one for you because the answers get long. I assume you believe that if you have a debt, personally, it affects your cash flow. You pay some money towards that each month and it would reduce your cash flow. When you give us this long, drawn-out explanation about cash flow and liquidity versus the insolvency of Ontario Hydro, you conveniently forget that you have decided, over the next four years, not to pay back any of the loan and that if you actually paid back some of that loan, the cash flow would be in a non-positive position. Would you agree with that?

**Ms Clitheroe:** If I understand the question, it is, if we attempted to pay down the amount of debt that we had originally planned —

**Mrs Johns:** That you're required to.

**Ms Clitheroe:** — and pay for the nuclear decision that we wouldn't have sufficient funds? That's correct.

**Mrs Johns:** That is correct. When you say to us, as you so nicely answered to both Mr Conway and Mr Laughren, that you're solvent from a cash flow perspective, you're solvent from a cash flow perspective because you're going to go in violation of the Power Corporation Act and not pay off the SDR.

**Ms Clitheroe:** No, that's inaccurate. The cash comes from, obviously, the revenues we generate, so the cash position is a different number than the number that you look at when you look at the revenue in and the costs out, because of, as Mr Kwinter indicated, the depreciation. The depreciation is a non-cash charge. When you include the non-cash charge and the excess cash flow, that gives you the total sum of cash that is available to pay off the obligations of the company.

When I'm talking about cash flow, that's what I'm referring to. When I'm talking about the income statement and the losses that would be generated through the income statement, that is a combination of expenses which are cash charges and expenses which are non-cash charges, such as depreciation.

**Mrs Johns:** Okay, let's just look at your cash flow statement for last year. I'm only doing it off the top of my head, but you have a negative cash flow and that's as a result of a \$1,656-million depreciation number. I don't know if you're working in millions; I assume you are. So in effect you have positive cash flow of about \$900 million, whatever number we're working with; 900 on that sheet. What you have here are net income losses that are going from 300 to 500. If the same was true of last year that is true this year you'd be very close to not having enough cash flow.

1110

**Ms Clitheroe:** Do you have the number of the free cash flow?



**Ms Ng:** Yes. I think in the original business plan, for example, the free cash flows over a five-year period are \$7.7 billion, and that's made up primarily of depreciation, which like you said is ranging about \$1.6 billion to \$1.7 billion a year. Then you multiply it by five. That's almost \$8.5 billion. Then you have some net income and then you have the capital, and that was giving you the free cash flow.

When you look at the picture, for example, that we've just shown, you still would have the sort of \$8-billion to \$8.5-billion worth of cash flow from depreciation, but you're going to have some net losses. So instead of having a net income you have some net losses and you're having some increased capital expenditures as a result of the requirements. When you take a net of that it's more like \$1.5 billion over a five-year period, rather than the original —

**Mrs Johns:** It's a positive cash flow.

**Ms Ng:** It's a positive cash flow over the five years.

**Mrs Johns:** So over five years that's \$300 million, which is basically what I said.

**Ms Ng:** Yes, accumulated it's about \$1.5 billion.

**Mrs Johns:** Well, \$300 million on a corporation of that size is just nothing.

**Mr Conway:** Ms Clitheroe, I want to go back to the notes from the Hydro board meeting of August 12. This is an executive summary of the board meeting around the nuclear optimization plan.

Item number 4 — and I'm reading now directly from the Hydro board minute:

"An analysis of the preliminary financial implications of the recovery plan and related initiatives "indicates a significant deterioration in financial performance" of the company "from currently planned levels." Then it goes on to talk about cash flows will be "reduced by about \$6.3 billion over the" period 1998 to 2001, I believe it is. "While these results represent a significant deterioration from previously planned financial performance, the preliminary nature of the numbers employed make premature any judgements regarding the permanent impairment of the corporation's financial viability."

That was August 12. It's now November 4. We've had an intervening 11 weeks. What can you tell us about the intervening three months' worth of time and effort? Does the database make the situation look better or worse from your point of view?

**Ms Clitheroe:** The situation hasn't changed much in terms of the financial information we have obtained from the nuclear group. The extent of the cost is determined by how much nuclear production we're going to have. The more nuclear production, the lower the cost of the whole program; the less nuclear production, the higher the cost of the fossil fuel, the coal and so on. At the moment we have not been given any indication at corporate finance that the original estimate of nuclear production and therefore the alternative purchases that have to be made to supplement that loss have changed. So while our cash flows, as we've investigated them, have had some variations as we've

done more detailed work, the general parameters haven't changed significantly.

**Mr Conway:** On that, the Ernst and Young report, which you received on 7 September, raises a very real concern about one of these very points. They raise a yellow flag of concern around the planning assumptions the nuclear power division is using. I'm reading now from page 19 of the Ernst and Young report. They wonder whether the operating capacity of the existing Ontario Hydro nuclear plants, which has been averaged at 67%, is going to actually meet the target of 86%. Does anybody in finance share Ernst and Young's concern that that's a very ambitious, aggressive target that the folks over at Ontario Hydro Nuclear are using as an operating assumption for the NAOP?

**Ms Clitheroe:** The way we would handle that in corporate finance would be to indicate the risk we would see to the financial statement of not having the nuclear production at the planned levels. We would rely on the technical expertise of the nuclear folks to do the original plan. Then we would put a risk factor around, saying, "Well, if they only made it to 80% or 75% or whatever, here would be the magnitude of the impact." If the magnitude of the impact were such that we thought we should take a provision, then we would be recommending that to the board. As Ms Ng indicated earlier, in subsequent years we have taken provisions based on risk impacts of \$100 million. In the current plan there were escalating impacts because of the uncertainties you've identified.

**Mr Conway:** But you've never been in this corner before. You are in a very tight corner here. You're taking seven of these reactors down; the other 12, you're hoping, are going to operate at 86%. I hope you're right.

**Mr Machon:** I think we need some clarification on that point. The 86%, as I tried to explain yesterday, is an operating capacity factor, how you operate between outages. That is, you can't relate that to, you know, we've had 80%, 82%, as I related the other day, but they're apples and oranges.

**Mr Conway:** I'm now looking at it from a financial point of view. I accept your point, sir. All I'm saying is that the financial people are looking at this and saying the operating capacity that's built in to the recovery plan on the nuclear side is substantially higher than the record of the recent past.

**Mr Machon:** No, and that's the point I was trying to bring out. If you look at the average of the units that are going to be operating, the four-year average I gave, the B units have operated in the high 70s and the low 80s. We have assumed no better than that moving forward in the beginning years. In fact I believe you'd find, if you did the aggregate over the time on a rolling average, that they're in the 76, increasing over time.

**Mr Conway:** I'm reading from the Ernst and Young report. I'll let those people speak to that point, but I hear what you're saying. I guess my point is that from a financial point of view you're in a real squeeze here because you're getting very close to margins. There are all kinds of assumptions here, not just on the nuclear side but on the

availability and the price of the replacement power. One of the big assumptions beyond the year 2000 has to be that if there is going to be increased competition, you've got to believe that's going to put really significant downward pressure on your rates, and what does that mean in terms of your intermediate revenue line? I presume you've looked at that. Ms Ng?

**Ms Ng:** In terms of the market?

**Mr Conway:** Well, if we get an open market —

**Mr McNeil:** Mr Conway, could I talk to that for a second, if I might, about the open market, which seems to be the basis of your question?

**Mr Conway:** It's a pretty basic assumption around this table. Before we come to that, though, I want to go back to Ms Clitheroe about another issue.

You've been a former Deputy Minister of Finance, and by all accounts a very rigorous and purposeful public servant. One of the questions I have for you, Ms Clitheroe, as a voting member of the Hydro board, who's been a former Deputy Minister of Finance, who knows something about the sensitivity over at the executive department of government around Hydro matters, particularly unplanned, unexpected, multibillion-dollar expenditures: The minister's letter, Mr Sterling's letter, I think dated August 11, we hear, arrived at the board. This is the letter from the minister, the shareholder, asking the Hydro board to make sure they canvass all opportunities, all options, which I would take, and I've got to believe you, Ms Clitheroe, would take very seriously, both because of its relative rarity and the nature of the content. It apparently was circulated late in the day after much of the discussion, I gather, and the decision had in fact been taken. Is that your understanding?

**Ms Clitheroe:** The letter was circulated towards the end of the board meeting. I can't remember the precise timing, but I think the general tenor of your comment is correct.

**Mr Conway:** Were you aware of the minister's letter before you went to the board meeting that day, on August 12?

**Ms Clitheroe:** I had not seen a copy of the letter before the board meeting.

1120

**Mr Conway:** Were you aware of the letter? Were you aware of the minister's interest in and concern about the board canvassing all options?

**Ms Clitheroe:** I was aware of the minister's interest, but not through a letter process, through the regular officials process.

**Mr Conway:** Had you had any discussions with Ms Stevens and/or Mr Horswill about the minister's concern about what was at hand over the nuclear recovery plan?

**Ms Clitheroe:** I certainly didn't with Ms Stevens.

**Mr Conway:** Think carefully, Ms Clitheroe. You're a former Deputy Minister of Finance.

**Ms Clitheroe:** I'm trying to remember if I did with Mr Horswill pre or post and I honestly can't remember that.

**Mr Conway:** Did you have any discussion with anybody at the Ministry of Finance about these issues?

**Ms Clitheroe:** About the financial issues?

**Mr Conway:** Yes.

**Ms Clitheroe:** Yes, I certainly had discussions with Ministry of Finance officials.

**Mr Conway:** Which officials?

**Ms Clitheroe:** I spoke with Mr Gourley, the Deputy Minister of Finance, and I'm trying to recollect if I spoke with any other officials.

**Mr Conway:** That would be good enough for me. When did you and Mr Gourley discuss these issues prior to the August 12 board meeting?

**Ms Clitheroe:** I don't remember the exact date, but I had alerted Mr Gourley in June that I believed there were going to be substantial costs associated with the nuclear recovery program, in the multibillion-dollar range, and that we would have to discuss them once they became more available and once Mr Andognini's report was available.

**Mr Conway:** That's very helpful. With that as background, were you not as an officer of the Hydro corporation and as a member of the Hydro board a bit concerned about the manner in which Minister Sterling's letter was transmitted to the board, after the discussion and after the decision had been taken?

**Ms Clitheroe:** As I say, I can't remember if it was after the decision had been taken, but no, I wasn't, because the content of the letter had in fact been reflected in the request of the board to bring back further information, so I didn't see an inconsistency between the letter and the actions the board was taking.

**Mr Laughren:** I'm puzzled about what I would call a deferment of costs, if those are the right words, of the recovery plan. If you're going to meet your obligations under the statutory debt retirement part of the Power Corporation Act, it means putting off the cost of that recovery plan until a later date, right?

**Ms Clitheroe:** Yes, essentially that's correct.

**Mr Laughren:** Have you figured out what that means in terms of rates and when they would kick in?

**Ms Clitheroe:** Our expectation is that it does not imply a rate increase but that it implies rates would remain at current levels or around current levels out into the future. We had not gone beyond seven to 10 years in terms of our analysis.

**Mr Laughren:** I'm a little puzzled because it seems to me that cost, somewhere between \$5 billion to \$8 billion — it's fine to say capitalize it, if you will, the way you do a construction project, but when that construction project is completed, like Darlington, and starts getting reflected in the rates, it very much gets reflected in the rates. It's very real. What I don't understand is where this \$5 billion to \$8 billion, when the rubber hits the road, as it were, in terms of the rates — I still don't understand that. It must at some point get reflected in the rates.

**Ms Clitheroe:** I think the chart Ms Ng put up with respect to the capitalization and amortization —

**Mr Laughren:** Which?

**Ms Clitheroe:** Was it the second chart?

**Mr Laughren:** "Defer and Amortize NAOP Costs"?



**Ms Ng:** Yes, page 21.

**Ms Clitheroe:** The one that writes off the cost over a 40-year period. That gives you some indication of how you would spread those costs out over the life of the plant.

**Mr Laughren:** So it would be spread so thinly for so long that there'd be no increase in rates?

**Ms Clitheroe:** That's right.

**Mr Laughren:** Magic. Well, almost. I find that puzzling because at some point other things will happen in the corporation as well, right? Other things will happen such as retubing and refurbishing, write-downs, whatever. I just find it hard to imagine this happening without the chickens coming home to roost. I know what you're saying but are the numbers so — \$5 billion to \$8 billion is a big number. When Darlington hit at a cost of \$14 billion — for argument's sake let's say it's twice what the recovery plan is — when that hit the rates, rates went up 10% a year for three years.

I don't want to be overly simplistic and attach everything to Darlington because there were higher interest rates then and so forth, but at the same time that had a very substantial impact on the rates and here we are dealing with a number that's admittedly only half as big, but even half is big when you're talking about these numbers. I'm still wrestling with that in my mind, as to how that can just not be reflected in the rates. I know you're saying it's because of the length of time.

**Ms Clitheroe:** That is one of the options the board has in front of it. As Ms Ng indicated, there are other options, which would be to simply put those costs directly against the equity of the company.

**Mr Laughren:** You now have these three options in front of you. The Hydro board must make a determination on these three options; right? You haven't decided which one yet, have you?

**Ms Clitheroe:** That's correct.

**Mr Laughren:** Do you have a time frame in which you want to make that decision? How is that going to get resolved?

**Ms Clitheroe:** We would expect to go back to the board in December or January with respect to this issue. We haven't set a date certain as we're still investigating all the issues surrounding the costs. We need to get to the point that we have confidence in the 1998 business plan numbers, which not only include the NAOP but all the other divisions in the company, which we normally do through — the normal schedule would be that we would take preliminary information to the board over the fall indicating what we think the magnitude of what we're looking at is, which is essentially what we did with respect to the nuclear program in August. I presented some issues with respect to the business plan, planning assumptions, to the board in September. The normal pace would be that we would bring back a preliminary business plan in December, and at the end of January we would present a final business plan for 1998 out three years, with a budget for 1998 that would be specific budget releases; no releases beyond that one-year time horizon.

**Mr Laughren:** Would you expect the Ontario Energy Board to show an interest in this?

**Ms Clitheroe:** In the business plan?

**Mr Laughren:** In particular the deferment.

**Ms Clitheroe:** Usually the Ontario Energy Board is interested if — not only interested. They must see us if we're proposing a rate increase, or within the overall level of rates, changes to any specific rates. Where we have had the discussion with them has been in that context. If my memory serves me correctly, in 1993, when we did a write-off at that time against equity, there was some interest by the Ontario Energy Board in the process we used in that year.

**Mr Laughren:** What I'm puzzling about is to what extent the Ontario Energy Board will say, "Wait a minute now, you're not proposing a rate increase for this year or the next year, but you're doing a deferment of costs which otherwise would be reflected in rate increases." To what extent they would automatically show an interest in that, you don't know. I know you're not speaking for them.

**Ms Clitheroe:** I don't know that and I don't believe the energy board takes an interest until they get a referral from the ministry to precipitate their interest.

**Mr Laughren:** A final question has to do with the story that surfaced last week about there being a potential rate increase proposal by the Hydro board. Did you follow that? Do you remember that story?

**Ms Clitheroe:** Yes, I do.

**Mr Laughren:** Where did that come from, do you know?

**Ms Clitheroe:** I'm not sure where it came from. What I think it came from was a letter from the chairman of Ontario Hydro to the minister which indicated that rate issues would be discussed at the board, but I am not certain of that.

1130

**Mrs Fisher:** I have some questions for each of you, almost. I would like to start with Mr McNeil. My understanding is there are still negotiations under way for — I think it's improper to call it special deals, but let's call it different rates of electrical generation purchase, as we speak. You continue to negotiate with business, I assume. Let me put it this way: I hear a rumour that Shell was able to obtain a different than a regular rate, a load retention rate contract in the past while. Is that true?

**Mr McNeil:** Shell has been able to retain a load retention rate. Those negotiations were initiated, I believe, about two and a half years ago and they concluded, I believe it was, last month.

**Mrs Fisher:** Up in the Bruce last week we had the opportunity to have the three major proponents of the Bruce Energy Centre, those same ones who put an offer to you a short while ago. We had them at the table and one of them, who is doing business in the Chatham area right now, noted that there was a requirement for his company to sign 44 contracts, of which 40 had been signed in the past two years. He is ready to commission his plant. Guess whose the four outstanding are?

**Mr McNeil:** I can't guess. Could you enlighten me?

**Mrs Fisher:** Can't guess? Ontario Hydro.

**Mr McNeil:** I believe it's Chatham Hydro. They're not a customer of ours. I think the service contract is with Chatham.

**Mrs Fisher:** I think there's an interlinkage. Hydro is Hydro and Hydro is Hydro, and if they had support, they might be able to get done.

**Mr McNeil:** Most MEUs don't care to be classed with us right now.

**Mrs Fisher:** I understand that. The issue with regard to rates: You mentioned earlier, and I just want to take one more second on this because I have a couple of other questions to others, that one of the ways in which somebody could derive one of those on a different basis would be through a public utility commission, which in the normal way of doing business historically, in the silo mentality, would be only with a municipality. Has Hydro ever opened its mind to thinking that maybe somebody else could do it on a utility basis and help others?

**Mr McNeil:** I'm not so sure it's Ontario Hydro opening its mind as what Ontario Hydro feasibly can do under the Power Corporation Act at this time.

**Mrs Fisher:** That's a good point, so I'll ask you this. Everybody continues to hide behind that Power Corporation Act. You're a senior VP over there, I think.

**Mr McNeil:** I'm a vice-president, yes.

**Mrs Fisher:** Ms Clitheroe assists you as well. What recommendations have you made to the government, given that you know this tool isn't working for you? And it's not working in the best interests of the population of Ontario. What definitive recommendations have you made to the Minister of Energy in the past two years, because you've identified that it's a barrier for doing business in Ontario? What written information have you given to the minister that it's not working?

**Ms Clitheroe:** The barrier that you're referring to being the Power Corporation Act?

**Mrs Fisher:** Every time I hear an answer, it's, "The Power Corporation Act doesn't allow it," and yet you're running this corporation on behalf of Ontario, supposedly in its best interest. If you're a VP over there — finance, otherwise — what recommendations have you made to the minister that in fact this thing is flawed and is acting as a barrier for progress in Ontario?

**Ms Clitheroe:** Management submitted a paper to the Macdonald commission with the —

**Mrs Fisher:** I said to the minister.

**Ms Clitheroe:** We also submitted it to the minister. We submitted a paper with our recommendations about what the management of Ontario Hydro recommendations with respect to the industry restructuring would be, and included in that are the issues around the Power Corporation Act.

**Mrs Fisher:** Specifically you identified exactly what recommendations you would make to a minister who brings it to government for change to the Power Corporation Act. Specifically you talked about those very dirty barriers that are causing us problems being able to do business in Ontario?

**Ms Clitheroe:** We raised what we thought would be a competitive marketplace industry structure which would allow Ontario Hydro to do business in a more commercial manner.

**Mrs Fisher:** Ms Clitheroe, you're VP finance. I'm asking you, stop skirting the issue. I'm kind of like Mr Conway a little bit, getting frustrated. I asked you a very specific question and I want a specific answer, please. What specific issues regarding finance and your responsibilities did you either recommend personally or through your chair or through the board for changes to the finance part of the Power Corporation Act that is causing barriers in Ontario?

**Ms Clitheroe:** With respect to finance, we recommended that the company be put on a commercial footing. That would involve all of the issues that would be around a commercial capital structure and so on.

**Mrs Fisher:** Mr Chair, I would ask that we get a copy of that recommendation, please, because maybe it will fit. I don't know.

To go on, I would like to ask Ms Clitheroe a question. Last week I asked it of somebody else but you weren't here that day and I understand why and that's fair; you weren't asked to be. I know in the last six months there have been numerous contracts of electricity that were negotiated during the course of the time the Andognini report was being prepared and during the time we knew there was going to be a shortage of power in Ontario, not an abundance.

Most indications, publicly anyway, were that if in fact something happened to the magnitude that's been recommended, we may be buying power as opposed to selling it. Yet my understanding is that in the last eight months, during the course of the time the senior management of Ontario Hydro, as you indicated earlier, starting June of last year and working all the way through to the last year we've passed, there was some indication there wouldn't be enough power.

I ask this question one more time. Would you agree that there is a net penalty difference because of the fact those contracts were signed and now had to be cancelled, zero impact to the residents of Ontario?

**Mr McNeil:** Excuse me. Are you referring to the interconnected market contracts?

**Mrs Fisher:** Yes, I am.

**Mr McNeil:** Could I just repeat, since I gave the answer last time?

**Mrs Fisher:** Actually I wanted it from Ms Clitheroe.

**Mr McNeil:** Certainly.

**Ms Clitheroe:** Yes, okay. I was just confirming with Mr McNeil because he has the most up-to-date information, but my understanding is that there was no financial impact of the contracts that had been entered into and getting out of those contracts.

**Mrs Fisher:** Zero?

**Ms Clitheroe:** That's my understanding.

**Mrs Fisher:** Okay. Ms Clitheroe, I was listening very carefully when Mr Laughren was asking you a few questions, and Mr Conway as well. I just have to reconfirm



what I heard before I ask the question. Did you in fact say the financial plan to the NAOP has yet to be approved? The plan has been approved but not the financial substantiation to it?

**Ms Clitheroe:** That's correct.

**Mrs Fisher:** I know I heard you say that more nuclear production lowers the cost and lower nuclear production increases the cost.

**Ms Clitheroe:** That's correct.

**Mrs Fisher:** That's right too. I would ask you how, then, number one, you could recommend to the board of directors — I heard you voted for the proposal. How could you do that as a finance head of Ontario Hydro when you didn't have the information to back your academic knowledge of the plan? How could you agree to approve a plan when you yourself, if I recall reading the minutes of the board meeting, which I did, questioned that? How then would you have voted for that?

**Ms Clitheroe:** The planning decision that was taken was based on the advice given by the experts in the nuclear field as to how much production we could be expecting. Certainly, if the nuclear division can produce more from the nuclear reactors, that would be a tremendous help to the financial position, but with respect to the approval of the proposed nuclear recovery program, what was being approved was the method in which the experts — Mr Andognini and his team — were proposing to get the reactors up to a level of higher production. In that event, relying on the experts in the nuclear field, I can support the recommendation.

With respect to the financial impacts, we indicated that we had to come back and give further details with respect to the financial plan and that we were not asking for releases of dollars for the full plan until we were able to assess that more determinatively.

1140

**Mrs Fisher:** As financial adviser to the corporate body that was trying to make a decision that day, when you look back today, do you think it makes any sense whatsoever that you wouldn't have strenuously objected and said, "You're going at this the wrong way," that there was in fact a two-stage proposal that needed to be decided upon or needed to be presented for decision-making? One would have been the NAOP, the technical recovery plan, which I have yet to hear anybody disagree with — not one party. But I hear numerous people saying: "Hang on. There's no substantiation to be ensured that it is \$5 billion to \$8.5 billion, or maybe it's \$11 billion or maybe it's \$15 billion." Do we know?

As vice-president of finance or whatever you are at Ontario Hydro, why would you not have strenuously argued that it was in the wrong context of doing good business on behalf of the consumers of Ontario to vote that day? Why would you not have done that?

**Ms Clitheroe:** What was approved that day was the approval of the plan of recovery; it was not an approval of the financial spending.

**Mrs Fisher:** I won't say any more. I think you get the point and you keep skirting it with some other answer.

**Mr Kwinter:** I just want to pick up on that. Ms Clitheroe, I have a copy of the minutes of the August 12 meeting and I want to read from it. It says:

"Corporate Financial Implications and Issues: Using overheads, the executive vice-president, corporate business development and chief financial officer, Ms Eleanor R. Clitheroe, apprised board members of potential corporate financial implications and issues with respect to the NAOS and of corresponding Ontario Hydro Generation Co actions. Ms Clitheroe's presentation included the context for the potential financial implications, scenarios, net income, charging NAOS to 1997 operations and its impact on retained earnings, equity and potential write-offs, fuel cost sensitivity, OM&A and capital increases versus the business plan, production changes, debt outstanding, debt increase (NAOS versus the business plan), SDR requirements...."

It seems to me they had been given a pretty extensive overview of the financial implications. But having said all that, one of the board members, Mr Bullock, "expressed the opinion that...he is concerned that the board has not had sufficient information and opportunity to exercise the due diligence required for approving the NAOS decisions....," and you agreed.

What we have is, on the one hand, you've presented all of the financial implications, and quite detailed according to the minute, according to your presentation, and on the other hand, you have raised questions, and Mr Bullock has raised questions about the due diligence that was done. Yet notwithstanding that, it was approved.

Before you answer, and I'd also like to ask Ms Ng: Did you, as a professional, have any concerns about the due diligence that was done before this decision was taken?

**Ms Clitheroe:** Would you like me to respond to that?

**Mr Kwinter:** Yes.

**Ms Clitheroe:** During the course of the discussion at the board meeting, which I indicated to you and apologized perhaps at some length earlier in answer to your question, there was a discussion about, rather than receiving as an advice, approving the plan. I believe you have a copy of the board resolution that what be approved was the first part of the board resolution without the subsequent two paragraphs on the board resolution. The discussion that occurred here, that you're flagging up, was to say that we could not approve the financial implications or the financial releases for the plan but that we could only approve the plan for planning purposes. So the subsequent two paragraphs were adopted. The discussion you're seeing here was satisfied by the inclusion of the last two paragraphs in the resolution that you see in front of you.

**Mr Kwinter:** Ms Clitheroe, you indicated to my colleague Mr Conway that you had kept Mr Gourley apprised of the fact that there was a rather substantial expenditure contemplation coming up. Was the Ministry of Finance aware that on August 12, this thing was being changed from an information item to a decision item and that the board was in fact going to commit — and I know you say they didn't commit, but I can tell you that the planning stage is well under way and they did commit. If you read

the minutes, they committed to this program. Was the Ministry of Finance aware that that was going to take place on August 12?

**Ms Clitheroe:** Not to my knowledge. I don't believe anyone at the board was aware prior to the discussion that there would be a recommendation coming like that.

**Mr Conway:** Just against that backdrop, then, as a former Deputy Minister of Finance, you are smart enough to start the process in June of saying to Mike Gourley over at finance: "There are things happening at Hydro. We've got some problems. This Andognini gang are working on a recovery plan." I take it that you very wisely put the deputy at finance on some notice that something was up. That would be a fair assumption?

**Ms Clitheroe:** Yes.

**Mr Conway:** You are a former Deputy Minister of Finance. You know all about Hydro and this guarantee and all of that. So you put the people at finance, you put the deputy, on notice some time in June that something's coming.

One of the things that occurs is that the minister writes a letter, and this is where I have a real problem, Eleanor, because everything I know about you is that you're a very thorough professional. You're at the Hydro board. You're the chief financial officer. You're a voting officer of this corporation. You're a former deputy of finance. There is a letter from the Minister of Energy saying, "I want the board to look at all of the options." You've now just told my friend Kwinter that nobody at finance knew the decision was going to be taken on that day, the 12th, that I can understand. Nobody on the board apparently knew.

You get into that board meeting and it moves from an information item to a decision. You make a decision. When you saw that letter from Norm Sterling, a two-page letter saying, "Folks, I want all of the options canvassed," I've got to believe that you were very nervous and concerned about not only the speed of the decision-making process on August 12, but that nobody had bothered to tell finance and the Minister of Energy what was happening that day.

**Ms Clitheroe:** The at that time acting but now Deputy Minister of Energy was at that board meeting, so I felt the concerns of the minister or the concerns of the Ministry of Energy would be dealt with by the deputy.

**Mr Conway:** We're going to be talking to that person, but can you tell the committee what your recollection is of the participation of Ms Stevens and/or Mr Horswill at that decisive meeting of August 12?

**Ms Clitheroe:** Ms Stevens was not at the meeting.

**Mr Conway:** Mr Horswill was there.

**Ms Clitheroe:** Mr Horswill I believe was acting deputy at that time.

**Mr Conway:** That's correct.

**Ms Clitheroe:** He certainly alerted the board to government concerns with respect to exploring all options. I believe that was prior to the distribution of the minister's letter, in my recollection, but I'm not 100% sure.

**Mr Conway:** Again, you're heading down this road very quickly to approving in principle this multibillion-

dollar recovery plan, some of the financial aspects of which you yourself, according to the documents, have very legitimate concerns about. You must have been sitting there, surely, saying, "Gourley and that gang at finance are really going to be concerned." Did you think that?

**Ms Clitheroe:** I believed that their concerns would be covered off by the subsequent two paragraphs that were added on to the initial resolution, which indicated that the financial analysis would be thoroughly reviewed and brought back, and that no funding decisions were taken at that meeting.

**Mr Conway:** Ms Clitheroe, what I want to know is, around August 10, 11, 12, did you have any discussions with Minister Sterling and/or any of his staff about his concerns as indicated in that letter?

**Ms Clitheroe:** I don't believe I did. It's possible I spoke with Mr Horswill, but I don't recollect that.

**Mr Conway:** So you had no discussions with Minister Sterling or any of his senior political and/or departmental staff?

**Ms Clitheroe:** Sorry, yes, I did have a discussion with Mr Horswill. I'm recollecting that now. The board meeting was on a Monday or Tuesday?

**Mr Conway:** It was August 12.

**Ms Clitheroe:** I had a meeting with Mr Horswill and some others, not the minister, on the Friday.

**Mr Conway:** Was there anything beyond what you just said about Mr Horswill raising those concerns? What did you and Mr Horswill talk about on the Friday before the August 12 board meeting?

**1150**

**Ms Clitheroe:** I was accompanied by Mr Andognini. The discussion really centred around Mr Andognini's explanation of what the proposed plan looked like, and then my discussion was around what the potential financial implications could look like. There were questions of a nature of, "What about the write-offs?" and would they be necessary. They were more clarification-type questions.

**Mr Conway:** The interesting thing is that if you met on the Friday — and we should get somebody to check the calendar. If the meeting was on the Monday of the 12th, the minister wrote a letter dated August 11. After your meeting with Horswill, the acting deputy, the minister writes the letter, which tells me that whatever happened at that meeting between yourself and Horswill gave the minister enough concern to have him write a two-page letter.

When somebody whispers in my ear — I won't repeat that, but —

**The Chair:** Thank you, Mr Conway.

**Mr Conway:** I'd like an answer to that.

**The Chair:** Just complete that off.

**Mr Conway:** We now know that the acting Deputy Minister of Energy met with Ms Clitheroe two or three days, if it was the Friday — has anybody got a calendar?

**The Chair:** The 11th was a Monday.

**Mr Conway:** The board met on the Tuesday. You met on the previous Friday, which was the 8th or 9th. So we have the acting Deputy Minister of Energy meeting with



the vice-president of finance, Ontario Hydro, on the 9th. Then we get a letter two days later from the minister, quite a clear letter, to the chairman of Ontario Hydro where he sets out the concerns and the expectations of the government, which is entirely understandable. And then this letter arrives at a board, but really only after the board has made some decisions in principle about some issues that obviously Minister Sterling and Mr Horswill had some concerns about, some of which were given to you at that meeting on August 8 or 9.

I just can't imagine how you could sit in that meeting, Eleanor, again as a former Deputy Minister of Finance, knowing what the Deputy Minister of Energy must have told you that Friday, knowing — the minister's letter comes after that meeting. You go to a meeting where an information item becomes a decision item, a decision item that has multibillion-dollars' worth of unplanned-for expenditures. It just seems incredible.

We have the chairman now telling us that — I forget the phrase he used yesterday, but he tells the Globe and Mail yesterday that "The reality is they," the Hydro board, "flogged the hell out of this thing." Well, it doesn't seem to me that they did.

**The Chair:** Okay, can we pause for the answer. Any response?

**Ms Clitheroe:** At the meeting which included the acting deputy, he listened, he was briefed. The content of the letter was not communicated to me at that meeting. The letter arrived obviously some time the following week. It was presented to the board meeting. The board meeting's resolution with the request that financial analysis come back and that the analysis of Bruce A and Pickering A come back, at least in my view, satisfied me that the minister's concerns raised in his letter were being met, and I would assume they met Mr Horswill's concerns, as he was there during that process and did not see fit to need to add anything in addition to the resolution to address the minister's concerns.

**The Chair:** We are in the final round, so I will use my Manitoba watch and go slightly past the 12 o'clock hour.

**Mr Laughren:** I guess if I were writing this out as a script, I would have had the chief financial officer of Hydro go to that meeting on the 9th, I believe it was, the Friday, and if not blatantly then quietly offer encouragement for such a letter to be written to the chairman of the board to ask the board to consider all options, because I think if I were the chief financial officer of Hydro, I would want that to happen.

I then, of course, following the script, would have been disappointed when that letter was not dealt with prior to the decision being made by the Hydro board. I think that's the real sad aspect of this whole story of the 12th: that the minister's letter was dealt with after the important decisions were made concerning the nuclear recovery program. That's where I feel that matters weren't dealt with in an appropriate way, to use my words carefully, because I think to be fair to everybody concerned, that letter should have been right up front before any discussion of Mr Andognini's plan was laid before the board.

I guess my question to you then is, did you feel any sense of disappointment, to use a gentle word, that that letter didn't appear and get circulated until after the important decision had been made on the recovery plan?

**Ms Clitheroe:** Any concerns that I had during the board meeting, which I obviously expressed and which are reflected in the minutes, around requiring further due diligence around the financial statements, the financial impact, were alleviated by the couple of paragraphs that I've referred to. I did not feel that either the Ministry of Finance or the Ministry of Energy, which was represented at that meeting, would be concerned with the outcome, given the way the resolution was finally adopted by the board.

**Mr Laughren:** But, you see, you knew a lot more about everything than the other board members, it seems to me. You've got these poor folks from across the province coming in to serve on the board and they don't have the information you do about Mr Andognini's plan, about the cost of the options, about the problems with the statutory debt retirement. On all of those things you have a lot more information than they do. Perhaps you were comfortable with the letter not being circulated until the decisions were made, but if I were another board member, I'd be mad as hell about that letter not being circulated until after I'd been asked to make a decision. I would be really angry if I were a board member.

I don't know if they were, but I'd feel like I'd been had by somebody, and basically by the chairman for not circulating that letter, because the letter went to him. He chose — I can come to no other conclusion — not to circulate that letter until after the decision had been made. That really bothers me.

**Ms Clitheroe:** If I could pick up on two points that you've made, one is that the material provided to the board members at that meeting, both prior to and subsequent to that meeting, has been very fulsome. I take your point about people who are on boards having to absorb a lot of material quickly about an entity that they're not spending their working days at. On the other hand, they did have many months of reporting by Mr Andognini and they certainly had several discussions on prior occasions around these same types of issues, not necessarily with respect to the NAOP, in terms of how the financial issues work —

**Mr Laughren:** But they didn't know about the letter.

**Ms Clitheroe:** — in the Power Corporation Act. So with respect to full disclosure to the board, I certainly believe there was full disclosure to the board of all of the issues.

With respect to the functioning of the board and the input from the Ministry of Energy, I believe the government added the deputy minister to the board for the very purpose of keeping the board apprised of the minister's wishes. The deputy minister was there, and so in that event I'm comfortable that the deputy had the opportunity to make known all of the concerns and issues that the energy minister had.

**Mr Laughren:** But did the deputy in effect bring to the board the contents or the concerns expressed in the minister's letter?

**Ms Clitheroe:** I believe he did, but I understand that you are going to be seeing the deputy and perhaps it would be better directed towards him.

**Mr Laughren:** I'll tell you, I would be very unhappy with my chairman if I were a board member trying to do the best job I could under very difficult circumstances. I have some sympathy for board members who are making decisions of enormous import and don't have full disclosure. That's the only word that I can think of, that there was not full disclosure to the board members at that meeting, because that letter was not circulated. I think that's serious.

1200

**Ms Clitheroe:** Just to correct the impression here, the letter was circulated —

**Mr Laughren:** After the decision was made.

**Ms Clitheroe:** Again, I believe you'll have the opportunity to ask him about this directly, but I believe the chairman felt that the spirit of the letter and the request of the letter were being accurately reflected by the board and would have raised the issue had it been going the other way. When the letter was circulated, people examined the letter and felt the discussion and the resolution were consistent with the letter as circulated.

**Mr Laughren:** All I know is that if I were a board member, I don't think I would be any more if I were treated that way by the chair.

I wanted to return to the letter written to Mr Wilson, the new Minister of Energy, Science and Technology, and now the chief shareholder in Ontario Hydro, dated October 15 of this year, in which the chair, Mr Farlinger, talks about pricing options. The first part of the paragraph implies that it's really just special aspects of pricing that might need to be looked at. This is how I would interpret it, anyway.

"The board was advised that changes were necessary to the pricing options in order for Ontario Hydro to help mitigate the adverse economic impacts on direct customers and the Ontario economy of recent increases in system marginal costs. As well, the chairman and chief executive officer...was authorized to apply to the" cabinet "...for a regulation exempting Ontario Hydro from submitting a proposal to the Minister of Environment and Energy for review of these changes by the Ontario Energy Board."

What I'm trying to get at here is to what extent were those just basically housekeeping changes in prices, or was that referring to a general increase in rates by Ontario Hydro?

**Ms Clitheroe:** It was not referring to a general increase in rates.

**Mr Laughren:** What specifically was it referring to then? Help me out as a layperson on this. I'm just a country boy from the north.

**Mr McNeil:** We have a variety of rate classes and rate structures that apply to differentiated classes of customers. Several of our direct industrial customers have access to

what is known as the surplus power rate. It was a rate that was established when Ontario Hydro had a surplus of capacity, which it currently doesn't. Those rates are beneficial to retaining customers inside the province and to the economy of Ontario. With the absence of access to surplus power, those people are being exposed to a much higher rate of power.

One of the items we've gone through to help alleviate some of the concerns our industrial customers have with respect to price is to allow them to have what we call basically a pass-through rate, which is, if they so desire, we'll purchase power for ourselves on the interconnected market, but they'll be willing to pay a price that's higher than what they get it in Ontario for but lower than what a full built-in rate is. It is really an option rate. They don't get it firm. They take it when they want it. We have basically approached the government to get leave to do that. It had been done on an experimental basis this year, and several of our large and direct customers wanted to carry it on for next year.

**Mr Laughren:** The last sentence in that paragraph says, "The board of directors determined that a decision regarding the necessity for a rate increase in 1998 will be considered at the next meeting of the board." That was referring to that option, not —

**Mr McNeil:** No, sir. Maybe Eleanor would like to talk to that.

**Ms Clitheroe:** What Pat was talking about was the special situation, which was the front end of what you've just read out of the letter. The last line that you just read out of the letter was referring to what we would normally do in the fall, is examine whether a rate increase was to be requested or not, and that would be the case whether we were thinking of decreasing rates, no change in rates or increasing rates. So the rate issue —

**The Chair:** Thanks, Mr Laughren. Mr Galt.

**Mr Doug Galt (Northumberland):** Good morning. The whole area of finance, maybe just in a little more global sense, I would like to review and go over. We've heard from the Ontario Energy Board and they're saying that yes, they review the rates of some but not all. For example, the rural customers; they are not required under the PCA to look at that. Then they give recommendations to Ontario Hydro, which doesn't have to necessarily follow those recommendations. We then hear from the AECB and they're saying, "Oh no, we don't have anything to do with the finances. We just license and look after safety," and there's some question there at times.

We're kind of left with the poor taxpayer out there, the Ontario resident getting stuck. Who's really responsible for the finances? Where does the buck really stop? This is a monopoly; they can do whatever they want. Where does the buck stop?

**Ms Clitheroe:** The responsibility for rate-setting is with the Ontario Hydro board, and debt is issued on the recommendation of the board and with the government concurrence, with the government guarantee. Those are the two places, either on the revenue side or on the borrowing or financing the plan's side, that the authorities



are, either with the Ministry of Finance or with the Ontario Hydro board.

**Mr Galt:** I understand that you've just thrown up your hands and said Ontario Hydro doesn't have any responsibility?

**Ms Clitheroe:** No, no.

**Mr Galt:** That's what it sounded like.

**Ms Clitheroe:** I'm saying that the Ontario Hydro board has the responsibility for setting the rates and approving the business plans. They also recommend the borrowing program for the year, and that borrowing program must be concurred in by the Ministry of Finance for the government guarantee to be issued to it.

**Mr Galt:** I hear from the people of Ontario it's totally out of control and has been for a very, very long time. In 1985 we had some of the cheapest industrial electricity in North America and now it's extremely expensive, I am told, in relative terms. We hear some other figures coming in, but that's not what I'm hearing from industry out there. The people of Ontario feel that it really has been rolling out of control from back in the mid-1980s.

With your experience as Deputy Minister of Finance and now in this role at Ontario Hydro, to protect the people of Ontario and to give them the kind of confidence that they deserve, what kind of changes would you recommend be made to the Power Corporation Act? Surely to goodness there must be something that we need to do to protect the people of Ontario.

**Ms Clitheroe:** First of all, I do have some ideas around what changes could be made to the Power Corporation Act, which I'll comment on.

With respect to the first comment, however, about protecting the people or protecting the taxpayers from Ontario Hydro as a result of the restrictions under the Power Corporation Act, the Power Corporation Act empowers the board to take certain actions and the stewardship of the company is entrusted to the Hydro board in conjunction with the Ministry of Finance and the Ministry of Energy. I think the people are well served by what has been a very successful Ontario Hydro over the last 90 years.

With respect to the company being out of control, I'm not sure exactly what you're referring to in terms of "out of control."

**Mr Galt:** That was a very common reference in the early 1990s as the rates were going up.

**Ms Clitheroe:** If I understand your comment, it's around rates. Our rates have indeed gone up over the last number of years, and that was why in 1993 Ontario Hydro began the cost program, the reformation, commercial orientation — all of those programs that were put in place to —

**Mr Galt:** You did adjust your rural rates. Approximately a year ago we got beat up as MPPs very badly over those adjustments. There was absolutely no warning to us; it was just adjusted and away you went.

**Ms Clitheroe:** With respect to the overall rate structure, that rate structure we are operating within the rate freeze. Within the rate structure, we have been applying the Power Corporation Act requirements. I'm not familiar

with the issue you're raising with respect to lack of notice in terms of potential rate increases.

**Mr Galt:** I'm referring to the increase in service charge to rural customers and the drop in the kilowatt-hour. So the place that had the small barn with maybe only a few lightbulbs in it, all of a sudden their rates went up maybe three times what it had been, their total cost per quarter. It was quite a jar to an awful lot of farmers in rural Ontario.

How would you change the PCA? We never got around to it.

1210

**Ms Clitheroe:** With respect to the second half of your question, as I indicated to Mrs Fisher, the management had made a proposal with respect to the Power Corporation Act to put the company on essentially a commercial footing and to open up the industry to a competitive marketplace. That would necessitate some fundamental changes in the structure of the Power Corporation Act. It would remove the obligation to serve from one entity and distribute that to anybody who wished to supply power in the province. It would remove the monopoly from the company and force it to compete with other potential suppliers, either from the States or those who would build in Ontario, and put the company into a commercial footing where it would have to borrow without the government guarantee, that sort of extension of the commercial aspect of a capital structure and normal financing program of the company.

We felt that was consistent with the way we saw North America moving and that would both allow the company and other competitors to operate in a North American marketplace and would provide complete due diligence to the people of Ontario and provide them with reliable, safe and cost-effective power.

**Mr Galt:** It's interesting that you would recommend changes to the PCA to bring in competition, become more commercial. At the same time, Ms Ng earlier said that in the recommendations that she brought forward, none of this was considered. The Macdonald report sitting out there was recommending competition. We know there's a white paper coming very shortly, but yet no consideration was given to this when the finances were brought in for the August 12 board meeting.

**Ms Clitheroe:** The dilemma is for a management operating when they believe there are going to be changes to fill all the obligations of the current legislation and try to anticipate what is going to happen in the future. The Macdonald report is just about two years old now. We have had to fulfil all the Power Corporation Act obligations in that time frame. We will have to do that until and if legislation is changed.

**Mr Galt:** I'd have to correct you on your time frame; it's about a year and six months.

**Ms Clitheroe:** A year and a half.

**Mr Galt:** It came out in June 1996.

**Ms Clitheroe:** So we have to fulfil our obligations under the Power Corporation Act as well as try to anticipate what government policy will be, what the marketplace will

look like and adjust internally. To that end, we've set up business units; we've attempted, through internal transfer pricing mechanisms, to instil some competitive behaviour in the people at Hydro; we have changed some of the ways in which we analyse business decisions; we have a better handle on what our rate structure looks like vis-à-vis others — and as much as we can do internally to restructure along commercial mode without actually being able to give up the power-at-cost obligation to serve requirements that are on the company under the Power Corporation Act.

**Mr Galt:** I think I heard you earlier say in some of your testimony that the board does worry about the financial solvency of Ontario Hydro, and that's certainly good news to me and good news to the taxpayers of this province. But reflecting back on what's been going on from the development at Darlington to the change in rates and some of the other faux pas that have been happening over the last 12, 15 years, it's certainly pretty upsetting what has been going on. It's good news to hear you say that. When did the board start really seriously looking at the financial solvency of the operation of Ontario Hydro?

**Ms Clitheroe:** I've been at the company for four years. So for the time that I have been there, the financial condition of the company, the potential for the marketplace opening up and decreased revenue or loss of market share, the issue of would some of the assets that we currently have be useful in a competitive marketplace, have been topics for discussion since I've been at the company in any event. I suspect it predated that as well, but it certainly has been the case for the time I've been there.

**The Chair:** Ms Clitheroe, that completes this round of questioning, but just a couple of questions to wrap it up for the morning. One of the options sees Ontario Hydro taking a \$4-billion write-off in 1997. Am I correct with that?

**Ms Clitheroe:** Yes, that's correct.

**The Chair:** When would the board typically make this decision?

**Ms Clitheroe:** The necessity to make the decision would arise when they had finally made the decision as to what the financial plan would look like. For example, if a decision had been taken with respect to a specific asset in February of a year, then they would be obliged to deal with that at that time and write it off in the calendar year.

With respect to these specific write-offs, once they take the decision as to how they are going to handle the costs of the program and whether or not any of the plant and equipment has to be written off, then they would be obliged to put that accounting treatment decision into the financial statements. That could happen this year. It may not. It could happen the following year. It depends completely on when management recommends and the board approves any particular decision.

**The Chair:** So it may happen before January?

**Ms Clitheroe:** Yes, it could happen before January for the 1997 and then be reflected in the 1997 statements, the current year statements.

**The Chair:** If this committee wishes to make recommendations to the government on the appropriateness of

the options, would you be able to give this committee any undertaking that the board might be prepared to withhold a decision on those write-offs until this committee has made its decision?

**Ms Clitheroe:** I can't personally give the undertaking.

**The Chair:** No, of course. I understand that.

**Ms Clitheroe:** But I can certainly go back to the corporation and pass the committee's wishes on to it.

**The Chair:** There is a question to ask you about the assets. The equity that I see is something in the order of about \$49 billion. Would I be about right in the figures that I saw? Is it approximately that?

**Mr Campbell:** It's \$39 billion.

**Ms Clitheroe:** The book value of the assets is just around \$40 billion.

**The Chair:** About \$40 billion. Is that based upon market value? What's the value? How do you arrive at that magic number?

**Ms Clitheroe:** It's not based on market value.

**The Chair:** Is that a value that's in the eye of the beholder?

**Ms Clitheroe:** No, it's book value. For example, what did the piece of equipment cost? If it was to take it down to a very small level, what did a typewriter cost? It would be \$10 and it would go on at \$10.

**The Chair:** Okay. So in some cases, using the example you've given me, saying the typewriter will survive two years while a nuclear reactor will survive 40 years —

**Ms Clitheroe:** Right.

**The Chair:** That's the nature of the subjectivity.

**Ms Clitheroe:** That's right. In accounting treatment, some of those items would simply be expense, like pencils and papers and so on. At a certain level they are put on the books, capital, and then they are depreciated over a period of time.

**The Chair:** Those figures, in your opinion, with your significant experience, are pretty reasonable?

**Ms Clitheroe:** They're certainly correct from an accounting point of view. Whether you could fetch that —

**The Chair:** No, but I chose a different word.

**Ms Clitheroe:** Yes. Whether you could fetch those sort of dollars if you tried to sell a particular asset in the marketplace is a completely different question. That would be putting a market test to what the asset value is, and that is not what is reflected on the books.

**The Chair:** The final question goes back just again to stir at the issue raised by all of the caucuses and that deals with the timing of the introduction of the letter of the minister at the August 12 board meeting. Would it be unfair of me or fair of me to suggest that the chairman of the board had possession of the letter at the beginning or during the meeting?

**Ms Clitheroe:** I honestly can't speak to that.

**The Chair:** I see. All right. Thank you very much. If there are no other questions, I'll deal with that in another setting. Thank you so much and — oh, I do have a couple of questions from staff. If you'd please just stay on for a moment.



**Mr Campbell:** Ms Clitheroe, just to follow up your last answer to Mr Laughren, the minister's letter says — this is the October letter to Mr Wilson saying, "The board determined that a decision regarding the necessity for a rate increase in 1998 will be considered at the" November 10 meeting. That's next week. You'd said that's typically the type of thing you would do at this time of the year. But the corporation is a little bit out of sync though, isn't it? Typically at this time of the year or early in the new year the corporation would be considering a rate increase for 1999. Isn't that correct?

**Ms Clitheroe:** Yes, that is correct.

**Mr Campbell:** So if the board decided in November that a rate increase was required, then presumably the same exemption that is talked about earlier in the letter with respect to industrial rates would have to be requested as well as an exemption from the Ontario Energy Board Act so that rates could take effect in January 1998.

**Ms Clitheroe:** I guess there would be a couple of options. One would be to make a special request to accelerate the process. One would be to carry on through the normal process, but that would impact the size of the rate increase that would be required if that were the case.

**Mr Campbell:** Okay. With respect to the extraordinary measures that the board is considering, the acceleration of NAOP, costs in the 1997 or the exclusion to achieve SDR, those options assume that a rate increase is not necessary. Could you give the committee a sense, if the corporation and the board of directors were to consider a rate increase and not pursue these other options, what the magnitude of the rate increase might be?

**Ms Clitheroe:** Obviously that would depend at what point the rate increase were introduced, if it were January 1 or June 1 or whatever, and how quickly you wanted to raise rates over what time frame. We raised them over two years?

**Ms Ng:** Yes. I think technically, if you just do a technical calculation in terms of just meeting the SDR and looking at the shortfall in the net income that needs to be included in revenue requirement, and assuming that you can increase it, I think it's probably going to be somewhere in around a 11% rate level if you can do it on a full-year basis. But again all those things are a bit of a technical calculation based on full year and based on SDR and so on and so forth.

**Mr Campbell:** Just so I understand, 11% say for 1998? Is that what you're saying?

**Ms Ng:** Yes, I think it's around that.

**Mr Campbell:** Would there be consideration there for 1999 as well?

**Ms Ng:** I think again using the same technical calculation of SDR, the rate level would be somewhere around that same level over the years if you do a technical calculation.

**Mr Campbell:** I wonder, Mr Chairman, if you agree, if Hydro could be requested to file the November board documents with the committee some time after the board meeting next week.

**The Chair:** That's a fair request.

**Ms Clitheroe:** Certainly.

**The Chair:** Thank you to all witnesses. I appreciate your attending upon the committee today. Ms Clitheroe, in particular if you could hold yourself available for another appearance before the committee, we'd appreciate that. It's only a matter of working out our scheduling now, but we'll give you fair notice now that there will be a recall. Other members obviously may be called again back to the committee as we continue the hearings. I appreciate your presence today and your cooperation. Thank you very much. You are excused.

Members of the committee, we have now arrived at that time when we will adjourn. We will return at 1400 hours.

*The committee recessed from 1222 to 1403.*

#### TOWNSHIP OF BRUCE

**The Chair:** The committee will be in order, please. We will begin the afternoon session. The first witness is Dick Joyce, emergency preparedness coordinator, township of Bruce. Please come forward and take the witness stand.

**Mr Dick Joyce:** Okay. I'm not sure of the process.

**The Chair:** Just sit down and relax. If you would like a cup of coffee, we will get one for you.

**Mr Joyce:** No, thanks. I'm coffeed out for today.

**The Chair:** Then please make your presentation, and later we'll have questioning by members of the caucuses.

**Mr Joyce:** My name is Dick Joyce. I'm the emergency planning coordinator for the municipalities around the Bruce nuclear power development. I'd like to do a couple of things today: describe my role, and what our emergency preparedness program consists of up at the Bruce. By way of introduction of myself, I think you should all be aware of the fact that I am a former employee of Ontario Hydro. I was one of the people who received a pension in 1993, just so you understand where I'm coming from and you can take that into account, however you see fit.

I understand that you folks are aware of the responsibilities of Ontario Hydro and the province and the municipalities for offsite emergency planning in a nuclear emergency. The province has overall responsibility and control of the offsite public safety program, Ontario Hydro is responsible for the program within their site fence, and the municipalities are responsible for implementing directives which are given to us by the province. That's kind of the way the roles and responsibilities work out.

Our municipal emergency preparedness program consists of six elements. First of all, we are responsible for developing a strategy for dealing with a nuclear incident in our municipalities. We are responsible for developing plans and procedures for meeting that strategy. We are responsible for emergency facilities — in our case there are five facilities within our municipality — and the equipment that supports those facilities. We are responsible for the training, drill and exercise program. We are responsible for the public education program. We also have an infrastructure around our emergency planning process, just things like the meetings we have to have with

people, pagers and phones and developing, photocopies and all those things you have to support a program.

Ontario Hydro supports us within our municipality to the tune of \$60,000 per year to meet those responsibilities. Our staff consists at this point of one part-time person, myself; one temporary full-time person; and an administrative support person as well, who is also part-time. That's our municipal emergency preparedness program, six elements.

Next, to tell you where I'm coming from, I'd like to tell you about our expectations of Ontario Hydro.

First of all, as a minimum, we expect Ontario Hydro to provide staff for our offsite emergency preparedness centres in the event of an emergency. These are what we call monitoring and decontamination units, which are established to support the municipality. We expect these staff should be highly skilled, knowledgeable and trained in both radiation protection and emergency preparedness. That's our first expectation.

Our second expectation is that Ontario Hydro should have a site non-nuclear emergency plan and integrate this emergency plan with our own municipal emergency plan. It's particularly important in the Bruce because of Ontario Hydro's large presence in our area. They are in fact another municipality, as I look at it, within our local municipalities, and we expect them to be part and parcel of our municipal emergency preparedness program in a non-nuclear sense.

Third, we expect Ontario Hydro to provide leadership and proactive support for the offsite nuclear emergency preparedness program. We expect them to be out there looking and to support us if they see things that, from their perspective, need improvement or support, things that need doing. We expect them to provide some leadership by example and support us in our program.

Fourth, we expect Ontario Hydro to provide a technical resource to us in the area of radiation protection and in the area of emergency preparedness, giving us best practices from all over the world from their expertise. They've got a lot of very skilled and knowledgeable people, and we expect to be able to tap into that resource, often in an informal way.

Lastly, we expect Ontario Hydro to fund the offsite nuclear emergency preparedness program. I mentioned the six elements a little while ago. We expect Ontario Hydro to provide support in the form of dollars for that program.

That is the formal part of my presentation, folks. I have a couple of points I would like to make at the end, but if you like, I'll reserve that, if you'd allow me five minutes at the end.

**The Chair:** Thank you very much for your presentation. We'll begin the questioning with Mr Laughren.

**Mr Laughren:** Welcome to the committee. You were quite expansive in outlining what your expectations are of Hydro. Do they meet them?

**Mr Joyce:** This is one of those, "Yes they do, no they don't" situations. In some areas they do a good job in meeting those expectations; in other areas, improvement is required.

**Mr Laughren:** Where do they do a good job?

**Mr Joyce:** At the moment, they're doing a good job in conducting drills and exercises for those components of the program that they are responsible for; in other words, the monitoring and decontamination units. They have an aggressive drill and exercise program and they're meeting their commitments in that area.

1410

**Mr Laughren:** Where are they not meeting your expectations?

**Mr Joyce:** In a couple of areas. We would hope there can be some improvements made. We have noticed, particularly over the last few years, that some of the knowledge and skill base is perhaps not as good as it might have been in years past. We noticed — I shouldn't say "we." It is my personal opinion that there is not a succession planning process, that people are not necessarily being selected for some of these offsite jobs on the basis of their aptitude and skills and ability, but perhaps they happen to be available for that particular position, and there they are.

**Mr Laughren:** I have no idea what the answer to this is, but do you have any idea what the biggest fear or danger in Bruce county is regarding the nuclear plant?

**Mr Joyce:** From the standpoint of the residents?

**Mr Laughren:** Yes.

**Mr Joyce:** Until the announcements on the heavy water plant were made, definitely the toxic gas emergency was the large concern. Once again, I can only give you opinion, but I don't see a large nuclear fear in the Bruce area from, say, Southampton in the north to probably somewhere below Kincardine. In areas outside that area within Bruce county, yes there is some concern about the nuclear program. We have some people who are active, to whom I am actually going to talk tomorrow night at one of their meetings, who are very concerned about the nuclear option in that area.

**Mr Laughren:** In my community, we have a very large operation called Inco, and a couple of years ago — over a year, anyway — there was a massive leak of toxic gas. Inco just settled out of court for \$10 million, because a number of people went to hospital and so forth. People don't normally think of a mining operation as being dangerous in that sense to the local community, but it can be. Has there ever been a leak of any kind at the Bruce operations that would lead people to be concerned?

**Mr Joyce:** Once again I've got to give you opinion on this. There has never been a leak wherein we've had to activate our nuclear emergency plan. There have been some leaks that have been of significant concern to both the regulatory authorities and to the public; in fact, not so very long ago, in 1995, we had one that got a lot of press. But we have never had to activate the nuclear emergency plan in our area. We have never had a leak that has met the criteria for activating the plan.

**Mr Laughren:** Who approves your emergency plan?

**Mr Joyce:** Our plan is based on and must be approved by the provincial Ministry of the Solicitor General, Emergency Measures Ontario; at least my municipal plan has to



be approved by them. In fact, we were just going through that this morning.

**Mr Laughren:** And you update that from time to time?

**Mr Joyce:** Yes. Ideally, we would like to update it once every year. We don't meet that. Probably once every two or three years is about the best we can manage.

**Mr Laughren:** So when a heavy water plant goes down, you are able to take away some aspects of the emergency plan, are you?

**Mr Joyce:** Exactly right. We have two plans. One is what we call a basic emergency plan, which covers a toxic gas release, tornado, fire, flood and all the rest of those things; and we have a nuclear emergency plan. With the changes being made now, I'm integrating those all together, taking the toxic gas emergency plan out and sticking together the other two. So yes, there will be a significant thing that has changed.

**Mrs Fisher:** Good afternoon, Mr Joyce. It looks like maybe you were having a little more fun than we were in the Bruce last week, so it's nice to have you here in Toronto. The committee had the opportunity to hear a little bit about the plan and how it might work, but throughout the course of the hearings we have had some indication from authorities, if you will: the Ministry of Environment, which, although they don't approve it, certainly need to be a part of some of the undertakings; the Ministry of the Solicitor General, which of course does approve it in the end and must be part of the proceedings; the AECB etc.

In the past there has been a question, in my mind anyway, about the structure of forming one, who should be involved and to what degree they continually communicate once it's approved. In the area, we have noticed in the past that the medical health unit, for example, was maybe caught by surprise by not knowing something or was a little unhappy with some of the proceedings. Would you agree that there could be a better way of not only making the plan and getting it through the approval process, but then carrying it on on a more consecutive basis, if you will, as opposed to hitting it once in a while and hoping it works if it is ever called upon?

**Mr Joyce:** Yes, there can always be a better way. Actually, I think you're aware of the revisions being made to the provincial nuclear emergency plan which are going to help some of those things. There is a process in place to keep this plan under constant revision. The problem until just recently, within the last couple of years, has been that there just hasn't been the staff, both in EMO and within the municipality, to carry out what we need to do. We're starting to get a little better now and we do have a formal process to keep the plan under review, and a committee and all the rest of those things. It is putting pen to paper that is the problem right now. Provided that funding keeps on improving and all of those things, we should be in a much better position in a couple of years from now. That's my guess.

**Mrs Fisher:** Last week, the reeve of the host municipality, Mr Ribey, made a comment that struck me, that I hadn't thought of in the past, and it's very significant, I think. His request was, how would we consider the conti-

nunity in the event of an election year, for example? I guess that question hadn't been raised so blatantly before. Maybe it was so obvious, staring us in the face, that we did nothing about it. But having heard that question and recognizing that the municipal head right now is designated as the host respondent to an issue, is it time to reconsider that and think that maybe there should be somebody else? That's not in disrespect to anybody there; that's not what I'm getting at. But the continuity during an election year is at risk. The continuity after an election, because of a new council, which isn't well versed and prepared to take on that leadership, is at risk. Have there ever been recommendations as to what alternative body or what alternative proponent in the community might be the right party?

**Mr Joyce:** It is particularly important to us right now because of restructuring. We are going to have a new council in a couple of weeks and we are going to have a new council a year from now. In fact, we've anticipated that. What we are doing under Project Upgrade is to put a lot of the more operational responsibilities on staff — that would be me — so that we are responsible for the operational things and there is some continuity there. The elected municipal officials are then in a decision-making process. I am also developing a transition plan to get the new people up and running. Actually, two days after the election we are going to gather them all together and say, "Here's the scoop."

**Mrs Fisher:** But in the bigger discussion, has there ever been a suggestion that it shouldn't be an elected official?

**Mr Joyce:** No.

**Mrs Fisher:** Again, not in any disrespect to anybody who has had that ball to hold in the past, but it makes a lot of sense to me that if there is ever a period of time, even a minute, where there is lack of continuity or lack of knowledge because they haven't been in position long enough to train, something is at risk.

**Mr Joyce:** Two things on that. First of all, there has never been, to my knowledge, a consideration of a non-elected official. In fact, the Emergency Plans Act is very clear that it be an elected official who is responsible. This would be more of a concern in a non-nuclear emergency, like a tornado and so on, because in a nuclear emergency, clearly the direction for the emergency is through the province, through Emergency Measures Ontario. There is staff; there is continuity; orders and directives are given; and it's up to us to implement those orders — not so much of a problem. What is more of a problem is the other areas.

**Mrs Fisher:** Right. The hydrogen sulphide risks of the past, or whatever.

1420

**Mr Joyce:** That's right. If a tornado hits us on November 14 with a brand-new council, with a plan that's covered with dust, that's a problem, yes.

**Mr Kwinter:** Mr Joyce, I'm not quite clear exactly about the organization. Whom do you report to? Who is your reporting body?

**Mr Joyce:** I report to the head of council for Bruce township, the reeve of Bruce township.

**Mr Kwinter:** Does all your funding come from Ontario Hydro?

**Mr Joyce:** Yes.

**Mr Kwinter:** I assume that \$60,000 is used almost exclusively for salaries?

**Mr Joyce:** I'll have to qualify that. Of that \$60,000, \$20,000 is for administrative costs, things like paper and photocopies and phones and all the rest of those things.

There is another component of funding which we are able to enjoy, at least up to the moment, and that is JEPP funding, joint emergency preparedness program funding. This is a federal government grant which is sort of an ad hoc grant that you may or may not get. Right now, half of our full-time emergency planner is being funded through a JEPP grant, roughly 50%.

**Mr Kwinter:** Does Ontario Hydro have a counterpart for you on their site?

**Mr Joyce:** Yes, there are a number of counterparts for me within the Ontario Hydro organization both onsite and within their corporate office. I deal basically, within Ontario Hydro, with three or four people on a regular basis.

**Mr Kwinter:** Does the Solicitor General's department have someone as well?

**Mr Joyce:** Yes.

**Mr Kwinter:** What I'm trying to find out is, let's say there is an occurrence at Bruce. What is the chain? What happens? They obviously have people onsite who would respond immediately. Do they just call you to let you know about it, or do they call you if it's onsite?

**Mr Joyce:** Really briefly, the chain of events goes like this:

A problem occurs at the site. They categorize it; it meets a certain category. They have certain things to do based on that category. The first thing they do is call the province. The second thing they do is call the municipality. Then we go to our procedures and the province then takes over all control of the emergency response. They consult their plan and will direct us to implement certain protective measures. It might be to close the schools, it might be to set up road blocks, it might be to evacuate people and so on.

The province calls the shots offsite. The municipality implements those actions. Ontario Hydro focuses on their own within-the-fence situation. Does that answer your question?

**Mr Kwinter:** Which is exactly what I'm trying to get at. We heard from the people in Pickering, we heard from the Ontario fire marshal that he does not have any jurisdiction inside the Hydro facilities.

**Mr Joyce:** That's true.

**Mr Kwinter:** That's the same situation you have at Bruce?

**Mr Joyce:** Yes, that's true.

**Mr Kwinter:** So they really have control of that.

**Mr Joyce:** They are in total control within their fence, yes.

**Mr Kwinter:** And you coordinate what happens outside the fence?

**Mr Joyce:** Exactly. Including support to them if they need it, if they request support from us. Mass fatality, for example, we have to coordinate ambulances, hospitals and so on at their request.

**Mr Kwinter:** Have you ever been called upon to do anything for them?

**Mr Joyce:** Not from a big scale. We've had offsite ambulances go onsite every once in a while to help them out, yes, but not on a regular basis. They are sort of self-contained, if you like.

**Mr Kwinter:** What happens to your position during this election period? Do you sort of serve at the pleasure of council or is this something where you have a contract regardless of who the political masters are?

**Mr Joyce:** I have a contract, yes, regardless of who the political masters are. So I am continuous through these changes.

**Mr Kwinter:** I'm also not clear. Is this a part-time position or a full-time position?

**Mr Joyce:** Part-time for me, on a contract basis. I'm not an employee of the municipality. I'm a contract employee.

**Mr Kwinter:** But it's not a full-time. What happens if part of the time that you're not on duty something happens?

**Mr Joyce:** Normally I wear a pager. If I'm within a three-hour response of the station, I wear a pager. If I happen to be in Florida, as I just got back from, then our chief administrative officer wears the pager. I pretty well let them know where I am all the time. That's basically it.

**The Chair:** Mr Joyce, thank you very much. It was that easy and it was that helpful.

**Mr Joyce:** Good. I hope it was.

**The Chair:** We thank you very much for appearing before the committee. If we have any other questions, I know you'll hear from us and we know we'll have a speedy response.

**Mr Joyce:** Yes. I just had two points I'd like to make.

**The Chair:** Absolutely. That's why I want you to summarize. Go ahead.

**Mr Joyce:** One is regarding the IIPA study. I've read it over, particularly the part that involves my speciality, which is radiation protection and also emergency preparedness. I'd just like to make a comment on the IIPA, that in my own opinion, it generally hits the mark as far as what things need to get addressed.

The how part would be something that might be a little bit different. There are many ways to address a problem, many ways to skin a cat, if you like. I guess there is one guy, a very wise man who used to say, "You never ask a barber if you need a haircut." I see a little bit of that in the IIPA report. I see certain statements in there that identify problems which are really identifying the solution as opposed to the problem. That's the first thing.

The second thing is, I'll use another colloquialism, if you like. In anything like this, a big change like this, you've got to be careful that you don't throw out the baby



with the bath water. I'd like to say that there are people in Ontario Hydro — and I'm not saying this just myself — who are expert in my particular area of expertise. I've been involved with the Russian nuclear power program over the last little while. I've had people come over and visit Ontario Hydro stations and they have been very impressed with the quality of the people who work there.

So in all these changes that are being made, I would strongly urge people to make sure that you don't destroy some very venerable and very effective situations and customs and culture that are existing there today.

**The Chair:** Thank you very much. I appreciate your evidence and we thank you for being with us.

As we prepare to go to the next round, I might just mention to members of the committee, if you will make sure that all cell phones are turned off, please. It is distracting to hear the phones ring and I would hope that each caucus lead would ensure there's some discipline within the caucus and full support.

*Interjection.*

**The Chair:** Mr Laughren, speak to yourself and get that organized, so let's make sure we get that all organized, shall we?

**Mr Conway:** If you keep this up, you're going to join your friend Mel Lastman on the mat.

**The Chair:** We will have a talk about that one, won't we?

1430

#### ERNST AND YOUNG

**The Chair:** Let's move into the next round, Ernst and Young. Brian Caine, senior partner, please come forward. If you'll make your presentation, whatever time that takes, then we will proceed with questioning by caucus in rotation. The questioning will begin with the government caucus this time.

**Mr Brian Caine:** Good afternoon, Mr Chairman and the members of the committee. My name is Brian Caine and I am the senior advisory partner from Ernst and Young assigned to Ontario Hydro. Beside me is Ken Hartwick, who is the audit partner on the Ontario Hydro engagement. Ken was also the lead partner on the Ernst and Young report on the assessment of the financial estimates for the NAOP, which I believe has been provided to the committee.

First, I'd like to provide a little background and context to the report. Ernst and Young is a professional services organization, providing services in Canada and around the world. The firm has operated in Canada for 130 years and has been the auditor of Ontario Hydro for 90 years.

**Mr Conway:** Did you say 90?

**Mr Caine:** Ninety years. We've been privileged to serve as auditors for many governments.

**Mr Conway:** You've got some explaining to do, then.

**The Chair:** Those asides come out of your time, Mr Conway. Please carry on.

**Mr Caine:** At 90 years, it sizes it out of my time, I should assert.

As you're aware, Ontario Hydro's board of directors asked us to conduct an independent assessment of the financial support for the NAOP as part of its August 12 decision. The project team that did that work consisted of professionals from our firm along with support from Ontario Hydro's internal audit group under our direction.

I'll now turn to Ken, who took the lead role in preparation of the report, to outline the timing and the recommendations, the chronology.

**Mr Ken Hartwick:** Good afternoon. The mandate of the independent assessment report was to determine the quality, sufficiency and extent of financial analysis supporting the nuclear asset optimization plan based on the technical data that was provided as part of the IIPA report.

Our field work commenced on August 27 with a review of documentation, interviews and collection of the supporting evidence. A presentation of our findings was made to the audit finance committee of the board of directors of Ontario Hydro on September 7. In accordance with our normal procedure, the findings of the assessment were reviewed with Ontario Hydro management to confirm the factual accuracy of the evidence that supports our findings. As a follow-up to this presentation and at the request of the board, we provided our detailed report dated September 7, which you have, and a letter dated October 20 commenting on the status of our findings.

The report issued a series of findings on the financial estimates associated with the NAOP, and based on those findings, Ernst and Young offered seven major recommendations which have been summarized in the report. Very briefly, the seven recommendations were the range of options that Ontario Hydro considered in response to the IIPA report that should be documented such as cost implications and risk factors:

Corporate finance should determine the financial impact of each option.

A more rigorous financial analysis should be prepared for supply options should Pickering A not return to service at the scheduled time.

Implications of key NAOP assumptions must be assessed and substantiated before commitment of significant funds.

The risk associated with each option should be assessed and documented along with the cost implications and contingency plans.

Hydro should establish clear accountability for the integration and assessment of the NAOP options and financial analysis with authority to direct the analysis prepared by Ontario Hydro nuclear generation and other relevant business units.

Finally, a performance monitoring process should be developed to support the tracking of costs to the benefits achieved.

Our recommendations highlighted that additional analysis was required as it relates to the financial aspects of the nuclear asset optimization plan.

In response to the report, it is our understanding that the Ontario Hydro board has instructed management to undertake a series of actions to address the recommendations,

including the commitment to complete the necessary financial analysis as part of the business case preparation for the release of funding for the NAOP projects.

**Mr Caine:** At this point we're happy to entertain any questions you might have.

**The Chair:** Thank you very much, Mr Caine. If it would be agreeable to the members of the various caucuses, Mr Power asked if he could ask a few preliminary questions to lay the ground. It strikes me as a reasonable request, if that's agreeable to all members. Yes? That's concurred with. Mr Power?

**Mr Power:** A few background questions, if I may. Who instructed you from Ontario Hydro?

**Mr Caine:** The instructions were received from and pursuant to a requirement from the board of directors to have further due diligence on the financial numbers. The communication we had was with Ms Eleanor Clitheroe, who is the chief financial officer of the corporation. A copy of the terms of reference was filed with the board of directors and is included in the report.

**Mr Power:** Did you have ongoing communications with Ms Clitheroe as you carried out your work?

**Mr Caine:** In the course of our work, we had communication with a number of senior members of management of Ontario Hydro. I'll ask Ken to give a more detailed answer to that question.

**Mr Hartwick:** Yes, we did. It's fairly ongoing, in the preliminary collection of information and data phase that we were going through, to ensure that we had the supporting documentation as well as then venting our findings and the evidence that supported those findings through the various individuals within the management team.

**Mr Power:** Did you communicate to them your concerns as they arose or did you wait until the report was filed at the end?

**Mr Hartwick:** We began the review around August 27, and through the first week of collection of information, we went to an audit finance committee on September 7 and had discussions prior to that, so probably the Thursday or Friday before — I think the audit committee meeting was on a Sunday — to review the findings and what we were going to present as our findings to that audit finance committee.

**Mr Power:** Was that just an oral briefing or was there written documentation provided as well?

**Mr Hartwick:** For the audit finance committee?

**Mr Power:** Yes.

**Mr Hartwick:** A presentation was prepared and provided to the audit finance committee, which is reflected in the detailed document submitted to this committee.

**Mr Power:** Did Ontario Hydro receive a draft report from Ernst and Young at any time? Did they provide any comments back on that to you?

**Mr Hartwick:** Yes, they did. We provided this report that was filed with the committee, dated September 7. It was provided in draft to various people at Ontario Hydro to provide comments, to look for clarification on factual accuracy around the evidence and the evidence that sup-

ported our findings, and those comments were taken from Ontario Hydro.

**Mr Power:** Were there any comments or instructions to you which limited your scope or affected the tone or tenor of what you wrote in the final report?

**Mr Hartwick:** No, there was not.

**Mr Power:** Was there adequate time allowed for you to carry out your retainer? Were you satisfied with the amount of time you had?

**Mr Hartwick:** Yes, we were. We are satisfied with the report that was prepared and submitted.

**Mr Power:** Are there any major issues, from your financial expertise point of view, that you found as a result of your investigation that might have been outside of the scope of your retainer and therefore have not been reported on?

**Mr Hartwick:** I don't believe so.

**Mr Power:** Does your retainer continue at all with respect to the outstanding items you have outlined in your report?

**Mr Caine:** Might I address that as well? We are the auditors of Ontario Hydro, so of course the detailed financial plans, once decisions are made with respect to plants and other commitments, liabilities, would form part of the evidence we would look at in terms of determining our opinion on the fairness of the presentations of the financial statements for this year, which are closed off at the end of December.

**Mr Power:** In the interim, though, do you have any ongoing role regarding follow-up for the issues that are outstanding as identified in the report?

**Mr Hartwick:** We issued a letter on October 20, which I believe has been filed here, which gave a summary of the status report of management's progress on our recommendations, and we have no further role beyond that.

**Mr Power:** I want to be certain we're on the same wavelength here. You're doing no further investigation of the documentation. You filed your report, you've done a little bit of follow-up with that letter, and you have no further role until the year-end audit time.

**Mr Hartwick:** That is correct.

**Mr Power:** A difficult question, I think, but there's a concern raised that it might be too late for Ontario Hydro to respond to a number of the questions raised in your report because they're about to commit to the closure of Pickering, Bruce following shortly. Can you tell us what confidence you have that the type of satisfaction you expected can be met before December 1, let's say, or will Hydro be able to meet those questions before December 1 or year-end?

1440

**Mr Caine:** Perhaps I could deal with the overall context of your question and then pass it to Ken to talk about specifics. In terms of the request that we received to do this review, it isn't uncommon for a client who is examining a major investment or looking at some major event or change in direction to ask their auditors to go in and take a look at the support for financial information. Once



they've made that direction, it is an intensive process as you make significant changes in direction. That's the kind of context within which we conducted this examination and prepared these detailed reviews against the criteria that we stipulated in our report.

**Mr Hartwick:** I believe we have referred in the report as far as addressing the issues that are raised here are concerned. Some of them are very significant and will require some time. Whether they impact the December 1 time line, that's probably a question that management would be in a position to address.

**Mr Power:** To rephrase the question: Do you know for certain whether these issues can be satisfied to the level of satisfaction you've raised by December 1? Has somebody told you they will meet all of the issues raised in your report by December 1, for example?

**Mr Caine:** We understand that all of the issues that have been raised in the reports are being addressed by management. We've seen some evidence, as indicated in our letter, that for example documentation of the options and so on has been already provided. But we have no ongoing role with respect to determining the status of them at December 1. Our last review was at October —

**Mr Power:** Right. I guess the short answer is, you don't know. I guess you're going to find out at the year-end audit period, right? At the year-end audit period, if they haven't addressed these types of questions and they've proceeded with their course of action, what do you foresee writing at that time?

**Mr Caine:** We would expect to see a complete set of evidence as to what business plans have been prepared, that these matters would be addressed in those business plans as part of the evidence for assessing the valuation of the assets and the quantification of the liabilities as at December year-end, and also the delineation of any uncertainties that should be made known to the financial public and to the Legislature.

**Mr Power:** Moving that hypothetical one step forward, what if they haven't satisfied those criteria? What's the remedy? I guess you just write a report that outlines those concerns and do nothing further.

**Mr Caine:** We are required to prepare a report as to whether or not these financial statements state fairly the financial situation of Ontario Hydro. We would include our comments should we not be satisfied with the evidence we see in that report.

**Mr Power:** In expressing your opinion, if I understand your point correctly, you're dependent upon other expert advice with respect to, for example, reliability of the nuclear assets' costing and a variety of other matters. Have you retained or found that type of expertise to assist you with providing your year-end audit review?

**Mr Caine:** We have a general professional requirement that we follow with respect to the reliance on technical expertise. Generally it doesn't necessarily involve employing our own separate experts. It could, but it has not up to this point required that. We follow those based on professional standards.

**Mr Power:** In light of what you've seen now, and given the time frame you have before you, do you think it's reasonable that you would require that sort of outside expertise to assist you? Or is the firm of Ernst and Young confident they have the capability to write the audit report as matters presently stand?

**Mr Caine:** We look at that as we go forward. We haven't finalized our decision on the evidence that we're going to be requiring. Perhaps I'd ask Ken to comment. He's been dealing with this in a little more detail.

**Mr Hartwick:** That's correct. As we move forward through the year-end and through to issuing our audit opinion and report, again, that's an assessment we'll make as to whether we're satisfied with the information that's provided by management on management's financial statements, which will allow us to report, or whether we do require independent technical experts in the nuclear area or any other area through the corporation. Those are decisions we will make as we go through the audit process, but ones which we have not made as of today.

**Mr Power:** If I understand correctly, that's after the books close. End of December, mid-January you'd start your audit process, roughly?

**Mr Hartwick:** The audit process for companies such as Ontario Hydro is more frequent than that. It does go throughout the year. We'll have people in at various points through the year doing certain elements of the work. It's not as if we start the process in January or February, once the books have been closed off; there are certain elements that are done prior to that.

**Mr Power:** I just need to get a better sense of the timing here. Given that you have an ongoing audit process of some nature, given that you have to express an opinion within a couple of months, at some point you must make a decision whether Ontario Hydro has addressed the issues raised in your report satisfactorily and whether you require outside assistance to evaluate and express your opinion at the end of the year. That's got to be fairly soon. I'm just wondering if you can provide some guidance to the committee. Is that a month off, two months off, three months off?

**Mr Caine:** I just wanted to broaden the question, if I might, just a bit and then bring it right back down. In a general sense, we would look at all the evidence, including the AECB licensing of these facilities and other evidence that would provide us assurance that these are operating in accordance with the requirements that have been laid down in law and regulation. We are auditors after all and not technical experts in the nuclear field. That's the kind of evidence that we normally look to. Where we can't be satisfied with that kind of evidence is when we usually would want to consider other kinds of avenues for assuring ourselves that these assets are appropriately stated on financial statements.

That kind of decision-making, in this particular case, would be as they move forward, prepare detailed plans, have their discussions with the regulators. We have other avenues of evidence that we believe we can rely upon at this point. But we don't close down any options until we

finalize our audit opinion, which is generally in late February, early March — something like that timetable — if it goes by historical standards.

**Mr Power:** Again, my question: If you're closing down by the end of February, there must be some point in time you have to make these decisions regarding the evidence and the need for expertise. Is it a last moment sort of thing? You must have some sense of this.

**Mr Caine:** Absolutely. We review the plans on a regular basis throughout the audit. We meet with the audit committee to finalize our audit plan and then have a second meeting with them generally in mid-audit. We would make that decision then, because you have to arrange for the right kind of people, if that was necessary.

**Mr Power:** Is your firm providing accounting advice regarding the three different financing options that have been presented from Ontario Hydro?

**Mr Hartwick:** I'm not sure the financing options that were —

**Mr Power:** Other than increasing the rates, we had a presentation regarding — there was an overhead you may or may not have seen that says, "In the absence of a rate increase, three additional options can be potentially considered by the Hydro board, to meet the SDR requirements prescribed by the PCA." Does that ring a bell with you?

**Mr Hartwick:** Yes, it does.

**Mr Power:** There are three issues they had provided to us. I'm just curious whether you're providing advice to Ontario Hydro or whether you'd be independently assessing whether or not they'll be meeting those statutory financing requirements.

**Mr Hartwick:** We provide advice as to the accounting treatment and disclosure of the financial statements associated with whatever type of option or whatever type of transaction might be involved. That is something that we have ongoing discussions with them on as to the correct accounting treatment for those options, rather than the options themselves. It's really the presentation and accounting for the options that management would be considering.

**Mr Power:** We've had evidence before this committee that Ontario Hydro cannot proceed as it intends to, that it will be in violation of the Power Corporation Act provisions regarding how it intends to finance the NAOP. Have you formulated any opinion regarding whether or not they are in compliance with the Power Corporation Act for this?

**Mr Caine:** Perhaps I'll start. It does seem like a tag team, but we do work on this on a consultative basis. We are aware of the provisions of the Power Corporation Act and the requirements for SDR. It's part of our review and it's part of assessing the financial statements and whether they comply with all the necessary requirements. We do that as part of our audit. They've consulted with us on accounting implications that are part of that consideration. That's our role. I don't know if there's anything you wanted to add.

#### 1450

**Mr Hartwick:** I think that's correct; it's around the role of accounting and presentation of considerations related to the SDR.

**Mr Power:** What I'm asking is whether you have formed an opinion on whether the financing options under the Power Corporation Act that Hydro has presented before the committee, and obviously to its board and to yourselves, are acceptable within the parameters of the Power Corporation Act.

**Mr Caine:** The specific opinion as to whether or not it's within the requirements of the Power Corporation Act is something I believe Ontario Hydro has sought legal counsel on. We also have access to the legal opinions they obtain and can obtain evidence with respect to it on that basis. It is a legal matter; it has accounting implications. We certainly have been advised on that aspect.

**Mr Power:** Might I interpret that to be that this is best left in the hands of the lawyers? Is that what that means?

**Mr Caine:** Many things are best left in the hands of the lawyers.

**Mr Power:** I just have one or two brief questions left. Are you satisfied that those options then fall within the generally accepted accounting principles for a regulated public utility of this nature?

**Mr Caine:** Again, there is a set of generally accepted accounting principles, which includes how to handle situations where there are rate regulation processes, and that's part of our advisory thing that it does. The specific signoff on that has not happened yet.

**Mr Hartwick:** I was just going to comment on the options being considered and the use of that rate regulatory framework. Those are discussions which are ongoing and will be addressed as part of the management set of financial statements, and our opinion that gets attached to them, so we have not concluded our deliberations on the acceptance of the options.

**Mr Power:** I have some familiarity with the GAAP requirements. It's clear from your report you were not satisfied at the time, and I can understand why from the way you've laid it out. I guess there's a question: At what point will you be satisfied in your mind that the GAP has been met for a publicly regulated utility? I take it that's an issue that will be dealt with just at the year-end audit.

**Mr Caine:** Absolutely. We do that as part of our financial audit and completing our review once they've completed their suggestions of what the accounting should be.

**Mr Power:** Mr Chairman, I have no more questions.

**The Chair:** Then we'll take it to the caucuses. We'll begin with Mr Galt.

**Mr Galt:** Good afternoon. I was just curious: If you turn to page 6, I notice it says you started on August 27 and substantially completed by September 5. Is that accurate?

**Mr Hartwick:** That is correct.

**Mr Galt:** You worked quickly.

**Mr Hartwick:** Yes, we did.

**Mr Galt:** We've been hearing a lot of evidence here about various figures. The figures seem to be all over the



place. As a member of this committee, I'm finding it rather confusing to see just how scattered these figures are, and I'm beginning to wonder just where some of them are at. Certainly, you as auditors reviewed it. I've looked at some of your report. Of course, you never expect to find compliments in this kind of report. Usually, it's finding the problems rather than the good things.

If we look at this recovery plan, the NAOP, a big concern is whether financially and economically it's truly viable. You people have been thoroughly through this and I'm looking now for more of a personal opinion than a critique that was carried out in here. Do you see this as viable, and if so, why and how, or if not, why?

**Mr Caine:** In the terms of our engagement, we were engaged to look at the financial support for the NAOP and specifically did not look at the technical side of the options, as it's not in our area of expertise. In terms of viability, that is really a technical question, if I understand your question correctly. We assessed the financial support, the due diligence for that estimate, and came up with these conclusions. As you say, they didn't expect nor did we expect these to be complimentary. These are areas that need to be addressed.

**Mr Galt:** We've heard already from the AECB and the OEB and a whole bunch of others on the safety aspect of it, and there's been quite convincing evidence that, provided operated at reduced efficiency, these units are safe. We're now looking at a new direction, and most of it relates to the finance and efficiency of it, so due diligence and all the rest — I'm back to your opinion on this.

**Mr Caine:** I think it's laid out in the report. The conclusions we came to were, as outlined there, that certain areas needed to be addressed for us or the board of directors to have sufficient assurance to go on and commit the funds and to exercise their role. That's what they asked us to do; that's what we found.

**Mr Galt:** I think I'm hearing from you then that if management addresses these, it is not as serious as it might appear on the surface. If addressed, everything should be in order.

**Mr Caine:** In terms of financial support for this, this is a comprehensive list of the things that needed to be dealt with in our professional opinion, yes.

**Mr Galt:** Of course, in a recovery plan you're looking for some sort of flexibility so they can move and it isn't all nailed down, and my understanding from the August 12 board meeting is it was approved in principle. Do you see this kind of required or needed flexibility built into this particular recovery plan?

**Mr Caine:** I'd like to ask Ken to address that, because that's a very specific question that was addressed in some detail here.

**Mr Hartwick:** We raised in the report several major assumptions that were made around the NAOP, and if those can't be achieved, what is the contingency plan and the need to have laid that contingency plan out? That is one of the requirements that we were looking for going forward: setting out the alternative paths that might be taken if some of the NAOP objectives can't be met. We

would expect to see that as they move through the development of the NAOP.

**Mr Galt:** With each move there would be new directions and new flexibility that could be looked at, at those respective times.

**Mr Hartwick:** Presuming things don't go exactly in accordance with where the NAOP direction is meant to go.

**Mr Galt:** There's no question that as you move down the road you find new roadblocks, new problems and issues. This has been brought forward by a new team of experts that has been brought in to look at this whole area. There's a fair amount of confidence being developed from the nuclear aspect and the technical direction we're being given. Do you have the kind of confidence, going over this, that we should have as we look at this recovery plan, when you look at the team?

**Mr Caine:** In terms of the review, of course, we did not assess the technical merits of the propositions. However, we had open and full access to the team. They were very liberal and free with their time, if I might say that, and they gave us all the explanations we required. We weren't hampered in any way in doing our examination.

**Mr Hartwick:** I'd just reinforce that again. Our expectation in doing the assessment really was around the availability of the nuclear team and others in other business units to provide the documentation evidence to review our findings with, and all that was done in a very professional manner by the nuclear team.

**Mr Galt:** So rating this with other organizations that you've reviewed in the past, from what I'm hearing from you, on a score of zero to 10, they rate pretty high on openness and providing information.

**Mr Caine:** They were certainly willing to work through the Labour Day weekend.

**Mr Galt:** Obviously, from those dates, the 27th to the 5th, they must have been.

**Mr Caine:** They matched our timetable and they did not complain, so it was quite professional.

1500

**Mr Galt:** I'm getting the feeling from you, from this recovery team, the recovery plan, that you're reasonably confident, outside of the technical aspect, the financial aspect, that it should fly and do the Ontario government and Ontario ratepayers justice.

**Mr Caine:** I'd have to refer back to our mandate. We assess the financial support and not the technical. This is a very extensive technical proposition that of course will be reviewed with the AECB and others. We didn't try to come to a final conclusion as that. Some 80% of this is technical and 20% is, say, financial.

**Mr Galt:** Since the IIPA report refers almost 80% of the problem as related to management of the past, and in the recovery plan very little relates to management, do you have any concerns there, that most of it relates to recovery of plants and laying-up and that sort of thing, rather than the management issue?

**Mr Hartwick:** The fact that most of our report refers — sorry. If I could perhaps ask for clarification.

**Mr Galt:** In the IIPA report, they refer to something like 80% of the problem as related to management problems of the past rather than equipment failures; in other words, poor preventive maintenance, that sort of thing. But in the NAOP report, very little is referred to about training of people and changing that management style. Do you have any concerns about that kind of thing in the recovery plan?

**Mr Hartwick:** With what we were asked to look at, I'd speculate that's probably a better question to be directed towards the nuclear team itself, as far as the mix of the management.

**Mr Galt:** That's outside of your area.

**Mr Hartwick:** It is. We were looking very much at the financial components and costs associated with the plan that was put forward, and the buildup and support for those costs.

**Mr Kwinter:** Mr Caine, we had Ms Ng in here earlier today and she went through her presentation. Everything she said was virtually conditional on the fact that this was a regulated monopoly, and as a result it has certain, I guess, accounting leeways that a regular company would not have. She made comments to that effect. Is that your understanding?

**Mr Caine:** Ontario Hydro is a rate-regulated monopoly, and the accounting practices and policies follow that environment under the PCA. That's correct.

**Mr Kwinter:** The reason I ask is, I took a look at your company's statement with the auditor's report, and for someone who is not familiar with that aspect, that there are different criteria that are used for a regulated monopoly, they would not gather that from your reporting letter, that these are consistent with practices used in a regulated monopoly; someone might look at it and think that these are the generally accepted principles of any company. Is that a fair comment?

**Mr Caine:** Generally accepted accounting standards in Canada require that you provide that kind of report and include the comments about the accounting practices and the relationship to the environment in a note to the financial statements. In Canadian GAAP that's required. That is how all such statements must be made in Canada, and that's the jurisdiction under which we issue this report. In note 1, you'll see all of that fully laid out, and because of that, the auditor's report refers to generally accepted accounting principles in Canada.

**Mr Kwinter:** The other aspect of your report: Is it influenced by the fact that you don't have to present the same kind of detail and the same kind of information that a normal investor would look for because of the fact that the debt of the utility is guaranteed by the province of Ontario? So it's really relatively immaterial as to what the numbers state and, as has been stated earlier today, in normal practices Ontario Hydro could almost be considered bankrupt.

**Mr Caine:** Just on the general, the principles we follow in terms of generally accepted auditing standards are the ones we apply as part of our professional training. The reporting requirements are set by the SEC and other

reporting requirements that require a certain amount of disclosure. So the disclosure in these financial statements is assessed against generally accepted standards, not specific ones that are crafted separately for Ontario Hydro; they're against generally accepted standards. I hope I've answered your question.

**Mr Kwinter:** I want to get back to the actual report that was made at the board meeting on August 12. In your experience, if a client was going to ask for a commitment from their board for an expenditure of approximately \$8 billion, and given the fact that you were sort of engaged after the fact, when this decision was really taken — there's been some discussion as to whether or not that decision was a decision in principle, but in my reading of the minutes, they agreed to go ahead and did it. Would it be normal practice for that kind of decision to be presented to you before they make the decision, so the things that you did after they made the decision could be considered by the board members and you could point out some of the shortcomings in what they've done?

**Mr Caine:** Every case is somewhat unique for all of our clients. But it certainly isn't uncommon for a board to make a decision to, say, invest in a massive change in a subsidiary or move or divest or whatever, and to ask their auditors to review the financial information once they've made a decision to go in a particular direction. It's often time-limited. The opportunity or something comes up and they need to make that decision, so often they'll ask the auditors or the chief financial officer to do due diligence on that and make their decision subject to that due diligence.

If you're asking the general business practice, it's not uncommon. It happens in a number of our larger clients. It happens in a number of our entrepreneurial clients as well.

**Mr Kwinter:** In your opinion, and as the auditor and financial adviser — I assume outside financial adviser — to Ontario Hydro, did you think this was a time-sensitive issue, that it had to be decided on that particular day?

**Mr Caine:** We are the auditors of Ontario Hydro. Again, I have to repeat, it's not uncommon for us to be asked to come in and take a look at the financial support for decisions after a general direction has been set. That's not uncommon, so I didn't find it unusual. Ken, I don't know if there were further discussions when we made —

**Mr Hartwick:** As far as the timing of us being asked to begin our due diligence process on the financial information, again, I think we have a wide variety of paths that clients follow, and this was one of them that certainly some of our clients have done.

**Mr Laughren:** Welcome to the committee, gentlemen. How long was Mr Farlinger gone from Ernst and Young? He was chair of Ernst and Young?

**Mr Caine:** Bill Farlinger was the chairman and CEO of Ernst and Young Canada until the middle of 1993. I'm not sure which month, but somewhere in the middle of 1993.

**Mr Laughren:** Were Ernst and Young the auditors while he was chair?

**Mr Caine:** Yes.



**Mr Laughren:** Were you then not at all surprised to get the request to do this work?

**Mr Caine:** To do which work?

**Mr Laughren:** The analysis of the recovery plan.

**Mr Caine:** As I said in the opening comments, we've been the auditors for a long time. In any case, where we are the auditors of a corporation, it's not uncommon for them to ask us to take a look at significant investment decisions that they are looking at from a financial perspective. They usually make the decision that they want to move in a certain area and they ask us to take a look at the background.

**Mr Laughren:** It shows you how naïve I am. I'm just a country boy from the north, you understand. I'm surprised at the cosy relationship with the auditor, who I've always thought of being off to the side and steely-eyed, as opposed to someone who gets in there and rolls up their sleeves and gets involved in a project like this. You're telling me that's quite normal.

**Mr Caine:** Two parts — perhaps the general question. The independence and objectivity of Ernst and Young is a very treasured asset and it is a major element of what we offer as auditors. It's required to be examined from a stringent point of view from professional standards and from standards set down by reporting agencies such as the SEC. We're fully independent and impartial with respect to Ontario Hydro and any client.

**Mr Laughren:** I'm not questioning your ethics, but I'm wondering, would there be eyebrows raised at the fact that when Bill Farlinger goes from Ernst and Young to Hydro, Ernst and Young remains the auditors for Hydro?

**Mr Caine:** The process for selecting auditors is the standard process. The review goes to the independent audit and finance committee of the board of directors, chaired by Don Fullerton in this case; each year a different committee. There has also been a process of tendering the audit over roughly every five years or so. So the process is pretty much the standard process. Other than that, it is fairly normal for auditors to be asked to examine additional information on behalf of their clients.

**Mr Laughren:** So you, Mr Caine, would be the one who would have agreed to do this analysis. Is that correct?

**Mr Caine:** We have a consultation process to accept any engagement. We followed that process, reviewed it, in this case with our internal review processes which are set down by our company policies, because it's a fairly substantial and important project, as are all of them.

**Mr Laughren:** And an important client.

**Mr Caine:** And an important client. So we followed that due diligence process internally.

**Mr Laughren:** Since in a sense — and I'm not an accountant. I'm not even an actuary.

*Interjection.*

**Mr Laughren:** An actuary is an accountant without a sense of humour.

Because you have, in a sense, a stake in the wellbeing of Ontario Hydro as their auditors — that may be a strange way of putting it, but in a sense you've got to pass judgement on Ontario Hydro at the end of the day as their

auditors. I don't think that's an unfair statement. I'm wondering, when you were asked to assess the recovery plan, to what extent you said: "Wait a minute now. We're not just doing some consulting here. We're the auditors and we want to know if this is the best of all possible solutions for what's going on at Hydro." To what extent did you ask for, or was it even hinted, that you could look beyond the recovery plan as it was presented to the board and then to you?

**Mr Caine:** The terms of reference specified that we were to look at the financial support, not the technical side of it. To really assess the best possible solution, that would have to encompass both a technical and a financial aspect, so that was outside the scope of this review.

**Mr Laughren:** I guess I find strange that given who you are, as Ernst and Young, somebody wouldn't be saying: "How do we know this is what's best for Hydro? How do we know these are the right financial arrangements?" The financial implications are enormous. I know you're used to dealing with the big boys up there, but \$8 billion is big no matter who you are. I would think \$5 billion to \$8 billion is big and not something you regard as small potatoes, given the significance of your client, of course.

If I was running a company like Hydro, I would expect my auditors and consultants to take a pretty tough view of what I was doing. I would want that. I'm wondering to what extent you felt that you were quite happy with the proposals Hydro had brought forward and that all you would do is analyse them in that fairly narrow framework, as opposed to saying, "How do we know there isn't a better way?"

**Mr Caine:** I think the role that we play as auditors in general is an important role. I guess I can be forgiven for saying that. The role that we played in this was an important role as well: to identify a need for better financial analysis, better information that was required in our field of expertise, in our area of what we do, what we know how to do quite well. So I found it not uncommon and I felt quite comfortable that we could and should do this work. That's my response.

**Mr Laughren:** Could you tell us which of the alternatives or options that Hydro brought forward you would recommend? I don't think you answered that question for us. Counsel was making reference to it, the three options of dealing with the expenses. Do you have that?

**Mr Caine:** No. I'm sorry, I don't.

For the record, I've just been handed a document dated today. Page 18 of the document submitted by Ontario Hydro identifies three options: exclude NAOB costs, apply a rate ruling to accrue the costs, and apply a rate ruling to defer and amortize NAOB costs.

**Mr Laughren:** Had you analysed —

**Mr Caine:** I had not seen that document, but I have heard about those general options that are being reviewed.

**The Chair:** Mr O'Toole.

**Mr Conway:** That's an important question. I'd like to hear an answer from somebody.

**The Chair:** I thought we had a response. Go ahead.

**Mr Hartwick:** Which one of these do we prefer? Is that the question?

**Mr Laughren:** Exactly. Get to the heart of it.

**Mr Hartwick:** Going back to the role of the auditors relative to the role of management, it's management's responsibility to determine the presentation within the financial statements and the accounting treatment. It's our role to audit those and assess them and determine that they meet generally accepted accounting principles and are appropriate within the context of Ontario Hydro.

**Mr Laughren:** So as long as all three, you don't give a hoot.

**Mr Hartwick:** I believe that management is in the process of looking at the options, and we'll be commenting on them in due course.

**Mr Conway:** You should keep that document, because I'm going to come back to it.

**Mr Caine:** Okay. We'll give it back.

**Mr O'Toole:** The questions I'll be raising will come from your report of September 7, as well as the 1996 annual report.

More or less to start off, I would make a statement saying something like, to me, if there were any implications of a relationship between Ernst and Young and the current board of Ontario Hydro, despite your 90-year relationship, professional as you've defined it, certainly this report would not show any cosiness, as Mr Laughren said. In my view, your report is rather critical. I'm going to read to you several things to substantiate my observation. In your executive summary:

"Evidence supporting the examination of a comprehensive range of options...was not available. Potential options were not documented...."

"Substantiation of key financial and planning assumptions...were not sufficiently documented...."

"Corporate and Genco's response to the NAOP option requires a more rigorous financial analysis of supply options...."

"Consistency in assumptions used in options analysis" — there were inconsistent assumptions used throughout NAOP, operational analysis.

Every one of the summary statements is critical. It is elusive inasmuch as it says, "We're not thorough, we're not rigorous, we're not developed technically." I concur that you must be at arm's length, certainly, because you did offer some critical views. Would you support my understanding of that?

**Mr Caine:** Perhaps I could just come back to the general. We are independent and objective with respect to Ontario Hydro and any audit client. I think people expect directness and straight talk from their auditors. They want to know what should be dealt with. They have limited time, so they want to deal with those things. Audit reports don't tend to be filled with all the things that go well, because people will tend to ignore that. We follow the process of saying, "Here are the things that have to be improved."

1520

**Mr O'Toole:** I guess it's the thoroughness of their own data that you as well have commented on in here that weren't fully developed.

**Mr Caine:** We commented on the completeness of the documentation of the data and its availability to support not only the board of directors' requirements but also other management teams' requirements. Ken, I don't know if there were other points.

**Mr Hartwick:** Just to add to that, again it's a reflection of areas where additional documentation or support or evidence was required in order for the financial analysis to be seen as complete and sufficient.

**Mr O'Toole:** I look to the history, and in that respect I'll be referring to the most recent annual report. You did refer to it both in the audit report, the signature copy, as well as the footnotes referred to in the financial statement. Even there, there's a fair amount of elusiveness, I would say. If it wasn't for a deep-pocketed government, they'd be in serious trouble. There's no relationship to debt-equity or to real value of assets as opposed to the on-book value.

I would refer you to a couple of things, first to footnote number 1, which deals with depreciation. Do you comment in any sense — professionally, actuarially or otherwise — with respect to the 40-year life expectancy issue? That's been brought before us, as the aging factor is — you said you weren't technical but you are the auditor and this is one of the comments in the annual statement.

**Mr Hartwick:** Perhaps I could address that. When we go through and assess the accounting policies which management and the corporation are following and the appropriateness of those policies, we look for evidence in support around the policies on the depreciation, the 40-year lifespan for the nuclear stations. There's a process within Hydro which examines that both from a technical as well as an accounting basis and we certainly have access to that information, particularly the accounting practices, and compare those to industry practices or what other utilities are following in North America. I think we come away satisfied that these policies reflect industry standards and are appropriate for this specific client: Ontario Hydro.

**Mr O'Toole:** Technically, they've been questioned by some of the presenters before us. If I could just go on, there are a couple of others. Number 6 was the corporate write-off one. In fact, I'm intrigued by the very language of it. It's sort of like a motherhood statement, in a way. "Hydro has embarked on the program to ensure that adequate nuclear recovery plan expenditures are made in future years to allow for the achievement of its nuclear excellence strategy." That's the strategy we're coming out of.

We're coming into one, and I think they're already using the words here — "The costs of the program which are planned to be incurred over the period 1997-2001 have been charged in 1996." We wrote off \$2.5 billion in 1996 as part of a nuclear recovery strategy. That's what has already happened. Here we are in 1997, and I expect the



annual report to say there's a nuclear recovery strategy — you might call it In Search of Excellence, or something, good title — and it might be \$8 billion.

One of the presentations this morning, by Ms Clitheroe, clearly showed a few options, one of which was to declare the cost of the recovery in year one so it didn't show up in the shortage of cash flow every other year, and it just technically moved into the books as debt. Could you comment to me on those what you call normal accounting practices with respect to the management and write-off of some \$7 billion over the last four or five years kind of at the whim of the board, technically?

**Mr Caine:** Again a general comment and then specific to Ontario Hydro. In any audit situation you look at the intended use of the asset, the evidence that supports that use — a capital asset, for example, a plant that is built and is expected to be used for a certain purpose — and then for reasons that are outside the powers of the organization or decisions they make with respect to their direction, they say they're not going to use that plant any more or they're not going to use it for the intended purpose. Then you'd assess the values that are left in that plant when it's not being used and so on. Those are the kinds of things you see here. For example, heavy water is an example of assets that depend on a certain use. Once they're not to be used for that, a generally accepted accounting principle says, what are you going to do with that kind of asset? Sell it? If you're going to sell it, how much is it worth, and if that is less than the amount that's on the books, it must be written off under generally accepted accounting principles. Those are the kinds of things we do as auditors. We look at changed business circumstances, changed external environmental issues that reflect on the values on the balance sheet, and we have discussions with management and they write off things that don't retain value because of those changed circumstances.

**Mr O'Toole:** This recovery plan of \$8 billion that they're going to footnote next year is going to show a fair amount that really isn't capital. It's the cost of replacement energy. There are some other factors — very little capital in there. There's maybe only \$1 billion to \$2 billion in capital in the whole plant. The rest is operation and maintenance factors, which are really labour costs. They're operational costs. How is that going to be somehow discharged as a footnote, and take a huge loss in 1997 to make the other years look streamlined, in some kind of recovery mode? Are those generally accepted accounting practices?

**Mr Hartwick:** I could perhaps start on that. Again, I think we were having discussions around the appropriate accounting treatment, presentation of those costs, as well as other areas within the corporation. Whether they are treated within the body of the financial statements — the income statement balance sheet — or presented through the note disclosure, those are discussions which are continuing. We do not present our opinion on the treatment of them until we report on the financial statements.

**Mr O'Toole:** I've got one question left. Statement 19 on the stranded debt, that's going to come up regularly.

The difference between going to a competitive marketplace and Hydro's current financial dilemma — by the way, every statement I've read shows some question between \$10 billion and \$15 billion that just isn't there. I had one of the previous chairs of the board say to us that they were pouring money out like it was coming out of the end of a fire hose, you couldn't drink it fast enough, into Darlington. That's what it appears to me they're doing here. They've got to compress time for the recovery. My question to you is, where should the \$15 billion, when this is all a competitive framework, be put? There's no value there for that. It's just book money.

**Mr Caine:** The question around stranded assets and stranded debt bears on the structure of the industry, the regulatory framework that is established and other issues that are within the power of government. They also have to do with the competitive price of electricity, something that's a marketplace reality.

With that as a background, it really has yet to be determined what those rules will be. Until those rules are clearer, it isn't clear what to do with this whole stranded debt, industry changes and asset impairment matter. That's why it's here and not accounted for in the financial statements. If we knew what the rules were, the financial management of Ontario Hydro and ourselves would require that it be accounted for in these financial statements, as opposed to just disclosed in a —

**The Chair:** Thank you, Mr O'Toole.

1530

**Mr Conway:** Gentlemen, if nothing else, you look like the alpha and omega of probity and rectitude. This is altogether too quiet and calm in here, given the issues that are at stake, as far as I'm concerned. So let me begin. You've been the auditors of this corporation for 90 years. I heard you say that earlier.

**Mr Caine:** Ernst and Young has, yes.

**Mr Conway:** Right. What is the current debt-equity ratio of Ontario Hydro, as best you understand it?

**Mr Caine:** The current debt-equity ratio, as presented in the last financial statements we opined on, which are the financial statements for the end of December 1996 — I have to do a quick calculation here. It may be probity but —

**Mr Conway:** I have it in front of me and it looks like —

**Mr Caine:** It's 90% debt.

**Mr Conway:** It looks higher to me than that, actually.

**Mr Caine:** Ninety-two, okay.

**Mr Conway:** We've got a debt-equity ratio now at Ontario Hydro of about 93%, 94% debt to equity. This is before the multibillion-dollar nuclear optimization plan, correct?

**Mr Caine:** Correct.

**Mr Conway:** How does that debt-equity ratio compare with other utilities with which you have some experience?

**Mr Caine:** Where the utility is a private sector utility, tax paying, for example, in the US or where it has to compete for funds on a basis as a per share —

**Mr Conway:** Let me cut to the quick here because we've got limited time. Are there very many utilities of which you have knowledge that have a debt-equity ratio as bad as or worse than this at Ontario Hydro, or is this common in this category of utility?

**Mr Caine:** In public sector utilities owned by government, a higher debt-equity ratio — that is to say higher being more debt to equity — is more common.

**Mr Conway:** I didn't understand that. Say that again. I'm looking at data that tell me that now, before we proceed with this multibillion-dollar recovery plan, Ontario Hydro has a debt-equity situation where they've got about 95 cents' worth of debt against every dollar's worth of equity. That's before we proceed with the multibillion-dollar recovery plan. Is that typical of the debt-equity situation of other regulated utilities? Yes or no.

**Mr Caine:** It's difficult to compare. It is higher than a share capital utility and what the recommended debt-equity ratios are — say, Standard and Poor's — for those kinds of utilities, but it is what it is for a rate-regulated utility that is dependent entirely on debt financing.

**Mr Conway:** If you look at the document Mr Laughren gave you, which is the Corporate Financial Implications and Issues, Tuesday October 28, 1997, from Ontario Hydro, on page 17 on their financial outlook, as I read this document, Hydro is planning on at least three years — 1998-99 and 2000-01 — of negative income. If that's correct, if the debt-equity ratio now is 93 cents' worth of debt against every dollar's worth of equity and we're planning three or four years of negative income, negative retained earnings, would it not be reasonable to conclude that this corporation is now, or will soon be, bankrupt by any kind of conventional standard?

**Mr Caine:** In response to that, in the notes to the financial statements, note 19 to the audited financial statements at December 31, 1996, it states that Hydro has recognized that its existing debt load is too great and that it is overleveraged to compete in a future restructured marketplace.

**Mr Conway:** No, you're skating away from me here and I want to come back just to the numbers. Your audited report tells me in 1996 the debt ratio at Ontario Hydro, as I read it, is roughly 94 cents' worth of debt for every dollar's worth of equity. By the way, as my colleague Kwinter observes, the debt is real. The equity, particularly as we move into a competitive electricity world, is perhaps a lot less firm. Be that as it may, the debt-equity ratio is roughly 93, 94 cents' worth of debt for every dollar's worth of equity. That's before we embark on a multibillion-dollar recovery plan, the assumptions of which you rightly point out in your report are in some key areas questionable and dubious. But we've got that debt-equity ratio. We're going into a five-year recovery plan of billions of dollars of unplanned expenditure and, Hydro tells us, according to this document, at least three or four years of negative income.

Given the debt-equity ratio going in, surely a reasonable person would conclude that three or four years of negative income, negative retained earnings, and the ad-

vent of competition, which is certainly going to have an impact on rates, revenues and the equity — how is this corporation not now or not soon to be bankrupt or insolvent by any conventional standard?

**Mr Caine:** As part of our role as auditors in this 1997 year, we're going to be looking at the proposed solutions and also their effect on debt servicing capability of the corporation, and no doubt the other rate rating agencies will be looking to the same kind of evidence. We take all that into account as part of our role as auditing these financial statements.

**Mr Conway:** What other rate rating agencies get at Ontario Hydro if they're not going before the energy board with a rate increase?

**Mr Caine:** Standard and Poor's and other —

**Mr Conway:** All right, sorry.

**Mr Caine:** They look at the debt and they look at the debt servicing capabilities and the projections and the cash flow and they assess that, and so do we, in assessing whether or not those liabilities are covered.

**Mr Conway:** Let me ask you the same question in a different way. Would a reasonable Ontario Hydro ratepayer and citizen, looking at your audited statement for 1996 and this financial outlook, which Hydro itself brought to this committee last week, be right in concluding that by about the year 2001 there may be more debt than equity in this corporation?

**Mr Caine:** I think that was one of the reasons Hydro management and we —

**Mr Conway:** My question is simple, Mr Caine: Would it be reasonable for a person looking at your audited statement and this financial outlook from Ontario Hydro to conclude that by about the year 2000 this corporation would be bankrupt, using the calculation that if you've got more debt than equity —

**Mr Hartwick:** I think a person could look at these and determine that you have more debt than equity. The question of the ability to service that debt is, again, highly dependent on the monopoly status of Ontario Hydro.

**Mr Conway:** Which we know is going to change. We know that for sure. You're the auditors of Ontario Hydro. You know that the buzz over there for the last year and a half, while this white paper goes through one of the world's most spectacular gestations and deliveries, has been that the monopoly status is going to end. You can't be the auditors of Ontario Hydro for 90 years and be there for the last 90 weeks and not know that.

**Mr Caine:** I think the role of auditors is to make sure that proper accounting happens and that disclosure of uncertainties like this is fully made in these financial statements. When we talked about the industry changes, the asset impairment, those issues in these financial statements went out to the investing public in the bonds and put them on notice: "What are the uncertainties?" It's disclosed here. No doubt fuller and better disclosure can be made as these things become more clear.

**Mr Conway:** All right, but I want to come back to —

**The Chair:** Thank you, Mr Conway.

**Mr Conway:** We've got to come back to this.



**Mr Laughren:** We know there's been a directive to Hydro that they must not increase their rates. That's what they've been told: "You must not increase your rates." I think it's to the end of this decade, isn't it? I'm wondering what the role of the auditor is when you hear something like that. You know how difficult Hydro's position is. I think it's fair to say it's difficult. If you don't want to go beyond that as auditors because you're on their payroll, I understand that, but I think you would have to agree that their situation is difficult. I'm wondering what your views are on this rate freeze with Hydro and, if they were given the latitude to increase rates, what that would do to their financial picture and whether you'd sleep a little easier if that were to happen.

1540

**Mr Caine:** We, as auditors, don't have a specific role with respect to rate increases. We do have a role with respect to the financial statements and assets, which is one of the pieces of information the board of directors used in setting those rates. In terms of whether they can recover the rates that they increase is a factor that we would have to look at, not only from the point of view of the ability to raise those rates under government direction should it come to that, but also whether increasing the mill rate would add to revenue or create a situation where you have dropped in volume. There are other impacts of passing on rate increases that we'd have to look at in terms of assessing the asset valuations.

**Mr Laughren:** I appreciate that. I don't think I insult anybody in the committee if I say it consists of laypeople when it comes to —

**Mr Conway:** Hear, hear.

**Mr Laughren:** — except the Chairman —

**Mr Conway:** And the highly paid staff.

**Mr Laughren:** Yes. But among us lay folk there is a real scepticism about the recovery plan, and I think it's a genuine scepticism. I don't think it's on party lines. I think it's just from having seen what we've seen and heard what we've heard that we're sceptical about it. Yet we don't have the expertise among ourselves. We can go out and get some, and that's what my question is. If this committee remains as sceptical as I think it is now about the recovery plan, what advice would you give us in order that we can come to a conclusion that may or may not sit well with you or with Hydro, but that would perhaps give us some assurances that the right decisions, these very important decisions, are being made?

**Mr Caine:** I've had the privilege of looking through some of the transcripts of your hearings, and I think they're quite thorough and so is the process you're following. I haven't been involved in this process in this jurisdiction before, but it seems like a fairly thorough looking into the plans and examining the independent experts who have been hired by Ontario Hydro to come up with the technical plan and to receive their commentary. Other than that, I hadn't thought to any additional steps you'd want to take. We were asked to look at, of course, the financial stuff and I think that is a wise move and one that identified a number of things that needed to be dealt

with as part of the normal due diligence that a board of directors and a senior management team take when you're faced with such a massive and major decision.

**Mr Laughren:** Do you appreciate the fact that we're sceptical and do you —

**Mr Caine:** Yes.

**Mr Laughren:** This is going to be probably an impossible question for you, but if you could step outside of your auditor's skin, would you share some of that scepticism?

**Mr Caine:** As auditors, one of our natural traits is to be somewhat sceptical, so I think it's a good attribute to have as an auditor, and one you'd expect in doing our work, which focuses on financial areas. We applied that due diligence, that due scepticism, that independence in identifying the areas that we thought needed to be addressed and which the board and management agree must be addressed before they commit the funds.

**Mr Laughren:** You're comfortable enough with the recovery plan, not just today but in the years beyond 2000? You're comfortable with the fact that that will allow Hydro, even given the fact that there's competition coming into the system, we all know that, which will mean that the rate issue is going to be very tough for Hydro to deal with? Who knows whether the revenues will stay up as high, as competition starts eating into their traditional sources of revenue? You are comfortable that the way it's being laid out now will get Hydro through this very difficult time?

**Mr Caine:** Again, we're doing a process. We are responsible for a process, one critical aspect of that. We are satisfied that we have had all the explanations, all of the information and open dialogue from that team. That gave us, in our sceptical frame of mind, a confidence about the completeness of that examination process. As to the rest of it, it is a technical plan, a technical question, technical issues, and also issues that would be affected by the form and nature of the industry and its regulatory framework.

**Mr Laughren:** If I could pick up on what Mr Conway was getting to, you would have an obligation as an auditor, would you not, to warn Hydro that the direction they're going, even though today that plan may be digestible, given what's potentially down the road — and I talk about competition and rates and revenues and so forth. You would have an obligation, would you not, to say to Hydro: "Look, you can do this by deferring the costs of the recovery plan or by loading it all into 1997 and so forth. There are ways you can get around a number of your problems, including the statutory debt retirement issue. But at the end of the piece, in the year 2001, 2002, 2003, 2004, 2005, whatever, we feel obligated as your auditors to warn you that you're heading for trouble"? Do you have an obligation like that?

**Mr Caine:** We have a responsibility to look at all of the evidence, including the matters that you've just discussed in terms of the future competitiveness, where prices are going and so on, looking back at the valuations of the assets on the financial statements, the impacts of those,

and to advise the people to whom we report, the board of directors, what the future —

**Mr Laughren:** But you haven't done that, right? You haven't felt the need to do that.

**Mr Caine:** We have completed our review for December 1996, which included write-offs which I think totalled in the order of \$2.8 billion, as well as disclosure of the significant uncertainties facing this organization. In our view, that is full, fair and complete disclosure and is in accordance with generally accepted accounting principles and with the requirement for disclosure of these major matters of uncertainty.

**Mrs Johns:** Good afternoon. I just want to preface my remarks by saying that all of my colleagues here are trying to protect the assets of Ontario Hydro. We realize that they have been eroded, if you will, over the last 15 to 20 years and we're just looking for ways that we can move forward to correct this problem. I'd like to ask you some short questions about as audit time has rolled around over the last 10 years. First of all, Mr Caine, can you tell me how long you've been senior partner at Ontario Hydro?

**Mr Caine:** I've been a partner — I hate that word "senior" — with the firm for 17 years.

**Mrs Johns:** No, but I mean on Ontario Hydro.

**Mr Caine:** I've been working on Ontario Hydro — I was the audit partner from 1987 to 1994 and I've done various and sundry other assignments around the utility industry, including Ontario Hydro, for some 20 years.

**Mrs Johns:** Suffice it to say that you've been around for a long time while this kind of evolution in Ontario Hydro has been going on. When you're getting ready to sign this financial statement and you've got to put your name on it here and sign "Ernst and Young," you must talk about going concern, the qualification. It strikes some of us that maybe there should have been a qualification about going concern. You must think about that. What's happened that hasn't put that qualification in the audit opinion?

**Mr Caine:** The generally accepted auditing standards require that you look at the issue of whether the financial statements of any organization should continue to be placed on a going concern basis, which these are. As covered by the Power Corporation Act and as we saw the evidence, with the write-offs of course that were required in December 1996, these statements are prepared in accordance with generally accepted accounting principles, including the requirement to be on a going concern basis, which they are.

1550

**Mrs Johns:** I'm just going to bluntly ask you this question then. Is it a going concern because the province guarantees the debt? Is that the only reason it's a going concern? Because in my mind, if you saw a company with this kind of debt, I think the projection for next year is \$600 million in income and \$34 billion in debt, that's not a going concern.

**Mr Caine:** A going concern review in a general sense is you would look at the ability to raise revenues, the projected levels of costs and the ability to service debt

based on cash flow. All of those have been taken into account in our decision with respect to the December financial statements and will be taken into account when we sign off as auditors for the December 1997 —

**Mrs Johns:** Let me ask you this, Mr Caine. If I gave you this financial statement and said, "Here, this is yours," do you think you could get a loan from a bank or do you think that you'd be a going concern?

*Interjection.*

**The Chair:** I want to hear the answer.

**Mr Caine:** That is a great answer. Can I take that answer?

**Mrs Johns:** No, Mr Caine, I'd like to hear your own. He was the one who gave us a lot of the debt in the province.

**Mr Caine:** And some good answers. That was a good one.

In terms of this, the question is a matter of fact. There are debt rating agencies that look at this and ensure that they will continue to advance funds to this organization. When any debt instrument is issued, we meet with them and with the bond issuers and they have full access to us. We give them all the information that we have as auditors and so does management. That's the process answer to your question. The fact is that debt is being issued on these and other debt instrument documents with full disclosure of all these uncertainties.

**Mrs Johns:** Well, I'm happy that I'm sending you the cheque tomorrow on the debt. Let me see. Ken, I want to talk to you. I'm sorry. I don't know your last name, sir.

**Mr Hartwick:** Hartwick.

**Mrs Johns:** You suggested that you reviewed the Atomic Energy Control Board decisions to ascertain exactly whether the plants were going concerns, whether the 40 years was a fair life to it. I think the atomic energy board has been fairly negative. I've read the atomic energy reports — Mr Conway and I have read them I think — for the last 10 to 15 years and they're pretty disastrous. How do they give you any sense of confidence?

**Mr Hartwick:** Perhaps just to clarify on the 40-year lifespan of the plant, there is a process within Ontario Hydro that reviews the appropriateness of that lifespan and that's benchmarked externally as far as what other nuclear companies are doing.

With reference to the AECB, the information that we look for from them is really just a licensing status of the various stations or individual units, so that as we are set to report on a set of financial statements, we understand the status of the units, the status of the licensing requirements, risks to those licensing issues. Those can be reflected in either disclosure within the accounts that are reported, if the risks are there — so it's really at that level as opposed to doing detailed examinations of all the very detailed findings that an agency such as the AECB would be providing to the management team.

**Mrs Johns:** I'm surprised you look as young as you do when Pickering got the six-month licence and you were able to keep the grey out as a result of that.



I want to talk about the NAOP this afternoon. I was amazed when Ms Clitheroe was here, and maybe I wasn't very nice this morning, when she suggested that financial decisions weren't really part of the NAOP board decision, that she thought that they would make the decision today — well, on August 13 — and later they'd get the financial information to the board. I think that states it fairly, although I'd love to be able to quote her directly.

I don't know if you're in the consulting side or the auditing side of the firm, but in your history of dealing with businesses as they make decisions about their future, is it that they don't consider the financial implications of their decisions until a later date when they're making some substantial decisions like this?

**Mr Caine:** I can answer that in a general sense, and I've been both on the consulting side of the business and on the auditing side of the business. Generally, all aspects of a decision need to be brought to bear to ensure that you're making a complete decision and one that's in the best interests of the organization.

With respect to this particular decision, a direction was set, based on my understanding of the advice of decisions that we were provided with, and we were asked to assess the financial information that was part of that decision. There was financial information. We were asked to look beneath that and look at the support and the components of it. My understanding was that there was financial information that was part of the advice to the board, because that was indeed what we started with to frame our examination. We looked at that and studied the support, the rationale and then went in beneath that to the modelling and the rest of the stuff that you'd expect us to look at.

**Mrs Johns:** On page 35 of your report — it's called Sustaining Base Budget — you talk about the potential cost implications of some of their significant planning assumptions. We talk about \$60 million understated, \$25 million overstated. We have some where we can't qualify them because there's no sensitivity analysis done yet. These numbers to the layperson in Ontario are pretty big dollars. This is a fair chunk of change here that they have underestimated and overestimated. Somewhere else I find that you say that because the different departments didn't consult with one another during that time frame, there was \$158 million not recorded correctly. These kinds of overages and underages, are they typical of what you'd expect to see from a firm that pays thousands of dollars for excellent accounting service, not from their auditor but from their internal staff?

**Mr Caine:** Again that's general and I'm going to ask Ken to comment on specific — I don't know how the time is. In a general sense, when we get asked to do due diligence assignments, we expect to find things that need to be directed. Often decisions are made with respect to direction. The people know what they're supposed to do, but they don't write it down to the extent that we think is important and so the kinds of general observations of, "We need better information on this, better information on that," that's not untypical. The specifics about this one, Ken, perhaps you can comment on that.

**Mr Hartwick:** Perhaps I'll comment on the one part in relation to different departments and some of the inconsistency in assumptions. Again, I think there are many groups within Hydro that were involved in the decision: Genco, corporate finance, the nuclear team. Again, we saw the inconsistency in assumptions and some of the financial information being used, and you would expect that to a certain degree. What we're looking for, and I have asked in our recommendations, is that those inconsistencies be addressed and quantified and assessed as part of the financial information that will form sort of the final business cases as they proceed towards committing funding.

**Mrs Johns:** Let me ask you this question, and I just need a yes or no. If you were a board of directors and you received the information that you got from senior management that you have done the analysis on right now and you had considered all the options and you had gone through a lot of process that day to come up with listening to all the information and making a decision on it, would you say that the senior management team had done enough analysis before they presented it to the board and was there enough due diligence done by senior management to be able to let the board make the appropriate decisions?

**1600**

**Mr Caine:** I guess the question was phrased, "If we were on the board and received this, what would we do?" The question is, the board received this and directed management to address each and every one of these findings. They asked for this additional information as to the support at the time they reviewed the material. I can only speculate that they were —

**Mrs Johns:** Can I just clarify? I have no problem with what —

**The Chair:** Very quickly, Ms Johns.

**Mrs Johns:** — the board did. I have a lot of problems with the second-class approach that management took in this. Do you think this is a second-class approach or do you think that it was good enough to take it to the board?

**Mr Caine:** The review we did was of the support of the material. We identified a number of areas where action needed to be taken to quantify what was in people's minds. It was quite clear that they had thought about a number of these things, had not spent the time to write them down and needed to do that in order to allow the management team to work as an integrated and cohesive whole. I should go on to say that the report is aimed at meeting the board of directors' requirement for further due diligence, but is also aimed at management, saying, "Here are the areas, which is a comprehensive list of all the things we would expect to be done over this period of time." It's been reviewed with management and I think it's correct they've substantially agreed with all of the areas that needed to be addressed.

**The Chair:** Mr Conway.

**Mr Conway:** I want to come back, gentlemen, to the basic question. If I look at the financial charts that Hydro presented to this committee recently and if I look at a year like 1998, where they are potentially looking at negative

income of something in the neighbourhood of 300 million bucks, and I'm looking now at page 17, are they insolvent? Is Ontario Hydro insolvent under those conditions? Yes or no.

**Mr Caine:** The question of insolvency relates to the ability to cover debt service costs in a cash sense. This information is not enough for me to answer your question.

**Mr Conway:** All right. But they've got three choices, and that's on page 18. I'm happy to have anybody else join in here because I think this is an absolutely critical question. Remember why we're here: Hydro has embarked on a multibillion-dollar recovery plan because of troubles identified in the Andognini report. That's the first point.

The second point is, the government of Ontario has said there will be no rate increase through to the end of this decade.

The third point is, the government of Ontario has clearly indicated that there will be a competitive market by the year 2000. Those are, I think, very clear factors in this situation.

With that as backdrop, let's then look at this situation, because this all hinges for us, for me particularly, on the integrity and the viability and the advisability of this particular plan.

You're here to look about the financial aspects of it, so let me ask you then, we have on page 18 of that document three options. The first option, option number 1, it's wonderful. It's like a piece of magic. Exclude the multibillion-dollar nuclear asset optimization costs. Just take them off the book. Secondly, it's to take a big write-down in 1997, as I read that. Correct me if I'm wrong.

Now if you take a write-down in 1997 — I'm going back to the 1996 report and I look at that debt-equity ratio — and, gentlemen, you've got to be the people to tell me; you've been the auditors for 90 years. If I look at the 1992-96 slide — well, it's not quite a slide because our debt-equity was an 84% ratio in 1992, then to 92%, then to 90%, then to 88%, then to 93%. I'm assuming the reason it's getting worse is because of the write-downs, in part. Am I correct?

**Mr Caine:** Yes.

**Mr Conway:** The write-downs are a significant part of that deterioration. If we take a massive write-down in 1997, I've got to believe that debt-equity ratio worsens appreciably. Is that correct?

**Mr Caine:** If a write-down is taken, the debt-equity ratio would worsen.

**Mr Conway:** That's the second option.

**The Chair:** Four billion dollars.

**Mr Conway:** It's about a \$4-billion write-down. Under those conditions, I can't imagine that there's anything left of the equity.

The third option is to amortize over a longer period of time, which I think Hydro told us they didn't particularly want to do, for a variety of reasons, not the least of which is the competitive market that's coming. So I come back then to, these are Hydro numbers. The first one, unless there's some kind of benediction from government that

allows that, I don't know how that can be done. The third one we're told is not very attractive, so the one that I guess we might be left with is the second one. We have a big write-down in 1997.

My question then remains, we're going to have a multi-billion-dollar expenditure that was not planned. We are not going to have an increase in revenues. There are no rate increases going to be allowed, we are told. How is this company not insolvent?

**Mr Caine:** The options you're referring to on page 18 are the options under the Power Corporation Act for the board of directors to meet their requirements under SDR. That's my understanding of them. In the absence of a rate increase — that's what you're referring to — these would accrue costs but would not have an effect on the cash flow per se. These options themselves wouldn't necessarily change the cash flow up or down. As I understand this page, these are how the board of directors would achieve its requirements under the Power Corporation Act to meet the technical SDR requirements. That's what this is all about. That's my understanding of this page.

**Mr Conway:** I'm just the layperson and I'm looking at this. We've been asked for our opinion on this plan and I'm looking at this and they're in a tough bind. They're in a real box here. There are no easy answers to this.

But let me come back to your report, because I was sceptical about Ernst and Young, good people that you are. Bill Farlinger had an association with you and I thought, "What are we going to get from Ernst and Young?" By the way, were you briefed by Hydro before you came here today?

**Mr Caine:** We've met with Hydro to receive the transcripts for earlier presentations, and just before we came over here, we asked a member of Hydro management, Malen Ng, to tell us what areas we might want to be prepared to discuss. That's one of the things —

**Mr Conway:** The answer is yes, you were briefed by Ontario Hydro.

**Mr Caine:** Oh, yes.

**Mr Conway:** Let me ask you this. In the absence of Hydro issuing new debt, does Ontario Hydro, in your estimation, have enough cash flow to service its current obligations?

**Mr Caine:** As part of our review for this 1997 audit we will be looking at its ability to service its debt. That's correct.

**Mr Conway:** But again — God, Mackenzie King had sons. I think I'm looking at them. What do you have to tell me more specifically? In the absence of issuing new debt, does Ontario Hydro, in your considered opinion — you've spent two weeks over there looking at this situation. You've been talking to them back and forth. In the absence of issuing new debt, do they have enough cash flow to service their obligations in this fiscal calendar year?

**Mr Hartwick:** The report we did and the assessment of the financial costs associated with NAOP dealt with the costs and expenditures that were anticipated under the plan. It was not a review of the cash flow requirements required to support the plan.



**Mr Conway:** But, gentlemen, I just have the 1996 report. It doesn't look very good and that's the reason we ask the question. The 1997 numbers have got to be worse.

**Mr Caine:** As part of being involved in issuing debt instruments, we allow our name to be associated with those debt instruments. I'm just going to ask Ken, when was the last time we were involved with that?

**Mr Hartwick:** The spring.

**Mr Caine:** So in the spring issuance, one of the things that the debt reviewers look at is debt service cost. At that time it was still well in control, and so far, with the rollover of debt, my assumption, not having completed the audit and not having been involved in a debt instrument release since spring —

**Mr Conway:** But the rollover is — this is back to Helen Johns's point earlier. What you're telling me is that they've got to be able to roll over that debt. I take it that in 1996, if they had not been able to issue new debt instruments, they would not have been able to meet their obligations, correct?

1610

**Mr Caine:** Every corporation must maintain its debt —

**Mr Conway:** This is a different corporation.

**Mr Caine:** — and this corporation as well.

**Mr Conway:** But in 1996, yes or no, would Hydro have been able to meet its obligations without issuing new debt, in fiscal 1996?

**Mr Caine:** Issuing new debt, rolling over old debt, they actually reduced their debt load in 1996 and have a plan to reduce their total debt size over a period of time. So that's what they did, but they did roll over debt in 1996.

**Mr Conway:** But if they didn't issue new debt — you see what I'm trying to get at here. The thing is that the government guarantee is what makes this such an unusual bird. One of the concerns that I think many on the committee have is that there is a kind of lassitude, a kind of almost indifference about certain normal business practices because there's always good old Mike Gourley and Ernie Eves over there, and they just get the bill, you know.

**Mr Caine:** Just to refer to the financial statements for 1996, the principal outstanding in 1995 was \$31.4 billion and the principal outstanding in 1996, at the end of the year, was \$30 billion, so \$1.4 billion had been reduced. There was, as part of that, a process of rolling over debt to improve their interest rate coverage. I could come back and talk about it or we could have some more information on that and the exact amounts they did.

**Mr Conway:** In fiscal 1996, how did they reduce that debt?

**Mr Caine:** Because their cash flow was so large, it was sufficient to take that cash and reduce the debt.

**Mr Conway:** What was the reason for their cash flow being so strong?

**Mr Caine:** Putting it simply, their cash income was higher than their cash outflow.

**Mr Conway:** I understand that. Projecting ahead, again our interest here is, what is the impact of the so-called nuclear recovery plan on that kind of flexibility?

**Mr Caine:** Exactly, and so the key thing that we look to is the cash-flow projection. At the end of the day, cutting through it all, it's cash in and cash out, projected forward, and what evidence and assumptions are they; that's what we look at, and that's what happened here.

**Mr Conway:** I read your report. Nothing is surely going to affect cash flow more than a competitive marketplace. We're only two years away, I would think, at most and Hydro is going to face some very real pressure on the cash side because there is going to be, I suspect, a marked increase in competition that is going to certainly not increase, for the short term, their cash-flow situation. It has got to be putting real stress on that. There is no reference to the competitive world that is clearly coming in any of the work you did in late August or early September. Was that a conscious decision on your part?

**Mr Caine:** As a general, overall comment, there is an increasing level of competition in the electric and gas power industry. It's worldwide. It is certainly extensive in the North American context. That business fact is there. On the question about the structure of the industry, suffice it to say there will be few more interested readers of the white paper than we as the auditors of Ontario Hydro in terms of what the impact of that is on the cash flow for this organization.

**Mr Conway:** But we had the Hydro people here this morning. I think it was Ms Ng, very much at the end of the morning, responding to Rick Campbell, our consultant. She said — and correct me, Rick, if I'm wrong — that we would have to increase our revenue line by about 11% to absorb these NAOP costs, these nuclear recovery costs. Now, that's not going to happen. The government has said, "We're not going to allow you to increase rates." They can't increase their rates for at least two years. At the end of two years, we are going to be into a competitive market. That's got to have downward pressure on the cash-flow situation at Ontario Hydro, all of which is background for this plan that the board has endorsed.

I look at your report and I must say I thought your report was quite telling. I agree with Mr O'Toole. I am very concerned by a number of the observations you have made about labour issues, flexibility and adjustment there, about the capacity factors. I think I know what the senior folks at Hydro are saying, but basically, their recovery plan is built on capacity factors above recent performance. That's fair enough. Productivity gains elsewhere you raised some concerns about. I tell you, I hope they're right but I don't have very much confidence at all that, given the very limited manoeuvrability here, this is going to work the way it's expected to, and your report adds to my discomfort.

**Mr Laughren:** I wanted to return to the potential options for the statutory debt reduction scenario. The first one, and I need help understanding this, says you simply remove the recovery plan costs each year. It says to exclude the costs from the rates each year. It doesn't say that

you exclude them from the balance sheet or the profit-and-loss statement, right?

**Mr Caine:** That is correct. Those costs are there. The decision of the board of directors is whether to pass those costs on to the ratepayers or to absorb them in the financial statements of Ontario Hydro without that pass-through.

**Mr Laughren:** Which would give you one of the reasons you'd have a negative net income, right?

**Mr Caine:** Correct.

**Mr Laughren:** The second one is where you throw all the costs into 1997, basically — a layman's way of saying that — and take the big hit in 1997.

**Mr Hartwick:** That's correct. You accrue all the costs, charge them in 1997 and effectively exclude them from the rate base again.

**Mr Laughren:** If you did that, that in itself would have an impact on the debt-equity ratio, right?

**Mr Hartwick:** Correct.

**Mr Laughren:** If then, in two or three years from now — it's already there, you can't go back and undo that — the decision is made by Hydro to write down Bruce A and/or Pickering A, what would then happen to the debt-equity ratio?

**Mr Caine:** If the decision had been made not to restart those stations and to take them out of service, they'd be written off, and unless there was some unforeseen revenue or other matter, that would reduce the —

**Mr Laughren:** Or accounting magic.

**Mr Caine:** Well, there is no accounting magic. There are accounting rules.

**Mr Laughren:** It's called double entry for a reason, you know. Anyway, I am really concerned with this, because at what point does debt exceed equity? It would at that point, wouldn't it?

**Mr Caine:** Correct, if they took a substantial write-off in excess of the retained earnings balance, which was about \$2.5 billion at the end of last year.

**Mr Hartwick:** If I could add to that, under the second option, where they are accruing and charging all the costs in 1997, the one piece which would be of interest is what that does to the net income going forward in subsequent years, if you're bringing all those costs back. So the question as to whether or not you get negative retained earnings from charging them all in one year and then subsequently having one of the units taken out of service and writing it off —

**Mr Laughren:** Or two.

**Mr Hartwick:** Yes, or two, or whatever — is really then dependent on what your net income numbers are and what other factors come into your net income, which is going to drive your retained earnings. So there are some pieces that would need to be looked at which have implications depending on which of the options you follow.

**Mr Laughren:** What do accountants or even auditors say about institutions that have a debt that's greater than their equity?

**Mr Hartwick:** If an organization is set up, as this is, under a regulated monopoly, and if they are able to main-

tain payment of their debts and foresee an increase in income in the future, that is accounted for under our view that they can go on on a going-concern basis. If our conclusion was opposite to that, we would not believe that they could on on a going-concern basis. It all depends on the evidence we see to support that.

1620

**Mr Laughren:** That would go back to Mr Conway's concerns. If at that point the write-downs occurred with the nuclear units, you'd already had the accrual of the recovery plan in 1997, you had competition coming into the system, you'd have pressure on the rates probably because of that — you can see why we're concerned about the future of this very important utility. I really worry about that because I'm one who thinks we should try to keep public power at cost. But I'm really worried about what's happening down the road and I don't think that's a crazy scenario; I think it's a possible scenario.

**Mr Caine:** As auditors we're very cognizant of the impacts of those in the industry, and the electricity industry, I will reaffirm, have knowledge, and that was part of the reasons for the fairly substantial write-offs that took place at the end of 1996. Of course, we're keeping on looking at that aspect for 1997 with the same point of view and the same scepticism, the same rigour.

**Mrs Fisher:** Good late afternoon. I'd like to start with the report. It was raised last week at the first financial presentation we had with some of the participants who returned here today. In your own report that I'm referring to right now, with some type of analysis of the NAOP report and the financial implications resulting therefrom — I won't read into the record today as I tried to do in very speedy time last week, but time and time again, even just reading the executive summary, there are seven or eight bullets that are very significant in terms of, quite frankly, negative comments related to what you had seen on a very first-brush run. Then, of course, once you get into the report, more and more questions get asked.

I didn't know until today that you were in fact the auditing company for Ontario Hydro for 90 years; I thought it was nine when you were saying that. I thought, "Well, that's reasonable." But can you imagine what it would be like if one single government was in place for 90 years, how that would affect the province?

**Mr Laughren:** Forty-two years was bad enough.

**Mrs Fisher:** We liked it, but we're cleaning up now.

**Mr Caine:** I can assure you that one single audit partner was not in charge of that assignment.

**Mrs Fisher:** He'd be rather aged, wouldn't he, or she?

**Mr Caine:** He'd be rather aged and perhaps out of date on accounting principles.

**Mrs Fisher:** Anyway, I just thought I'd mention it. It's a very long time.

**Mr Caine:** It's pretty common for audit firms to retain a long relationship with their audit clients. The process in public sector corporations is to go through a periodic tender to make sure that's still in the best interests of the organization. That has happened twice and both times we were pleased that the audit committee chose to retain us.



**Mrs Fisher:** I guess the interesting part of that is, if I recall, Ontario Hydro was formally formed in 1906, and 1997 almost makes you there forever in terms of the history of Ontario Hydro. It's not a negative comment, it's just an observation.

Having said that, however, your September 7 document and then your follow-up letter of October 20 outline some of the major points you made in your report and address somewhat your continuing concerns with regard to outstanding issues from that report.

I've been in both positions. I've been an executive director of a small finance corporation. I've also been on boards of directors. I rely on my staff to provide me with information that I can make good, sound decisions on. They're the ones who are paid and, in essence — I remember my days as a board member. I wasn't paid; it was a volunteer performance. But I counted on my staff to make good, solid recommendations based on all known fact.

My question to you is this: If you were the senior staff member at the board of directors on August 12, specifically relating to the finance side of it — because we had three of them here this morning. There were four but the fourth was not involved in the finance side of it nearly as closely as the others, nor responsible for it. If you were the senior staff making a recommendation to Ontario Hydro that day, would you have recommended that they adopt that plan, based on the fact that there were really two parts to it — three? There was the IIPA report, there was the NAOP report, but there needed to be some substantiation financially to support a sound decision.

Does it make sense? Would you have recommended to the board of directors, knowing what you knew, given that you didn't know everything — from your report you certainly highlight many areas where there was inadequate information — to the board to accept it and go forward that day?

**Mr Caine:** As I said before, it is not uncommon in business practice to ask auditors to take a look at the financial support for a major investment decision, especially when this —

**Mrs Fisher:** Sir, can I interrupt you? I don't want to use all my time, quite frankly. I just want you to answer the question. If you were the senior management staff advising the board of directors that day, and including having a vote at that table, would you have recommended adoption of the NAOP report and be moving forward almost the day after on some of the action plans?

**Mr Caine:** With respect to our role as auditors, I'm not in a position to make that comment. We looked at the financial aspects of this, did a professional piece of work on that and provided that report, so I am not in a position to really speculate on what I would have done had I been a board member and had all of the other information that a board member receives, one of which is the package they received that they gave to us, but also all of the information that they provided on a regular basis from Carl Andognini and the IIPA team. We were invited into parts of board meetings where that happened, so it was certainly

a flow of information all the way through there. That wasn't clear. There was a lot of information outside this, but we weren't privy to all of that information. I'm not trying to avoid it; I just can't answer the question.

**Mrs Fisher:** Okay. Let me ask it another way then. If I were the board member that day and I decided I wanted more information, and I knew you were our auditing firm for 90 years, if we had asked you to come to the board that day, given the information that was before us, and I was a board member, just a simple, old, little, plain board member, asking you, "Sir, Mr Auditor, the one we pay annually to give us advice, would you please advise me as to whether or not I should be in a position today to move forward, based on the financial information I have to support the NAOP report," what would you have said?

**Mr Caine:** I think we have to answer with reference to our report, based on that the decision asked for additional information. I can only presume that was because they were not comfortable or they hadn't the information they wanted. They asked us to provide that additional analysis and assessment, and we did that. That's a very normal business practice.

**Mrs Fisher:** I guess I'll ask you this then. Your letter is dated October 20 to the executive vice-president, chief development officer and chief financial officer, Ms Clitheroe, who was here this morning. In that letter it continues to outline some inadequacies. It does talk about some progress in the concerns that were raised in your review of the report after it was adopted by the board.

My question to you is, would you, if you were that person — I'm not asking you to be the auditor. Take off your auditor's hat. We have many people come before us right now in these hearings who are giving us advice. Some of them aren't even paid to do it. So now you're a paid adviser and I'm asking you, as a paid adviser, would you not — let me ask you this, as the auditor to the corporation. This is your role. Why didn't the last line read, "And we may suggest you hang on for a second until we discover in fact what the true costs might be if all options are presented"?

**Mr Caine:** There are three or four things there. I'm going to ask Ken to address the October 20 thing and I'll reserve our normal due diligence on accepting engagements.

**Mr Hartwick:** With reference to the letter, this was something that was requested and it's normal for a follow-up to the report that we did. You point out that there are still areas which have not been fully addressed. Some have been, such as the basis for recommendation of options, and that's a document which I believe the committee has been given. But there are additional areas that need to be addressed: improvement in the financial analysis; the labour issue remains as a big one that needs to be addressed. So they're there. What we've looked for is the commitment from the board and management that these issues will be addressed. We've been satisfied that we've received that commitment.

1630

**Mrs Fisher:** As you are their paid adviser, and you know that they're making decisions and you know that they're taking action today as we speak with regard to the implementation of that plan, does it not worry you that perhaps they're maybe not moving ahead, not necessarily in the right direction but maybe in the wrong order?

**Mr Caine:** I think we were asked on October 20 to talk about the status at that point. We have not been asked to assess it at its current state, so we would be giving an incomplete answer if we were to answer you as of November 4.

**Mrs Fisher:** That's fair. Okay. I want to move on to another issue because we're getting nowhere here.

I do want to address one comment, by the way. As of the midpoint of last week —

**Mr Conway:** That means, by the way, you're winning.

**Mr Laughren:** I think you'll be retained.

**Mrs Fisher:** That's a good possibility.

Just as a comment, the labour issues have come up about three times this afternoon since being here and we've had very strong indications of some very supportive moves forward in terms of their assistance in dealing with this problem. I just hope they're heard.

I want to get on with the issue of public corporations. Of course, with no disclosure of other clients, I would ask you this question: Have you ever been involved, as auditors, in a corporation — it doesn't have to be huge, just any corporation — that's gone from a public status to a public-private partnership status?

**Mr Caine:** Have we ever been involved in a privatization of a public —

**Mrs Fisher:** Hang on now. I didn't say "privatization"; I said "public-private partnership." I wouldn't call that privatization. There's another step before you get to privatization, if it was to be considered.

**Mr Caine:** Okay. I probably didn't hear it correctly.

**Mrs Fisher:** What I'm saying is, have you ever dealt with a public company which has moved into a public-private partnership in terms of equity injection, shared ownership, shared operation and responsibility — shared anything?

**Mr Caine:** Ernst and Young no doubt has. I've had a lot of experience with a variety of situations; nothing that fits exactly into that definition personally.

**Mr Hartwick:** I just echo the same comment.

**Mrs Fisher:** Have you been exposed to the British model that was presented to this committee?

**Mr Caine:** I have not been provided with that document. I'm generally aware of what happened in Britain in terms of the changes in their industry, and Australia and New Zealand and a number of other jurisdictions, but just general —

**Mrs Fisher:** As somebody a little bit entwined right now, but in I guess respect of the fact that you're going to be there, perhaps if this model was asked to be reviewed as the auditor to the corporation, in looking at it from the outside, is it something that maybe — everybody else is talking here about long-term debt and debt-equity ratio

and the ability to survive and the ability to go on etc and the true values. Knowing that perhaps we're out of money, when we say, "cash in, cash out," I would wonder if you would agree that without the money it's probably not there anyway in terms of the corporation.

**Mr Caine:** The cash flow, as demonstrated by these 1996 financial statements, is there and it's being used to reduce debt by \$1.4 billion in that year and by an additional amount this year, but I don't have the exact amount handy. I can get it, but there is a substantial reduction in debt because the cash flow is there.

**Mr Conway:** Gentlemen, what do you understand the statutory debt retirement obligations under the Power Corporation Act to be over at Ontario Hydro?

**Mr Caine:** In a general sense, the —

**Mr Conway:** In a specific auditor accounting sense.

**Mr Caine:** The Power Corporation Act requires a calculated provision under the terms of the act to set up what I think is called a sinking fund. Maybe I'll turn it over to the fellow who really knows the answer. Go ahead, Ken.

**Mr Hartwick:** I think it's within the rate recovery process that there's an allowance for the collection of funds that can deal with the debt retirement over the term of the debt that's in place at Ontario Hydro, in simple form.

**Mr Conway:** From an accounting and auditing point of view, and having been there for 90 years, are you aware of any provision that would excuse Ontario Hydro as a corporation from meeting those SDR obligations on an annual basis? They are statutory, as I understand them.

**Mr Caine:** They're statutory. We're not aware of any provisions that excuse them from that. The matter is a legal matter, of course, and I understand that —

**Mr Conway:** But it's also surely an accounting matter.

**Mr Caine:** Based on the legal interpretation of the requirements of that act.

**Mr Conway:** Over your 90 years, are you aware of any time or provision under which Ontario Hydro was excused from that?

**Mr Caine:** No. As I said, I'm not aware of any forgiveness of that provision.

**Mr Conway:** Thank you for that.

I want to come back to one of the aspects of your report done in late August and early September. I want to focus on this whole labour issue, because at the heart of the Andognini recommendation for this recovery plan was the observation that they just didn't feel they had the people to keep 12 reactors up to a good level of operating standard. I look at your report and you certainly raise a number of concerns about the assumptions around labour generally. Do you want to just elaborate on those concerns?

**Mr Hartwick:** Sure. With respect to the labour and the importance of it to the nuclear asset plan, there are core assumptions around, as you mentioned, to wet-lay and dry-lay some of the units, to the ability to move those people to the other 12 units to deploy there — so just the moving of people. I think also the nuclear team had certain areas where they had particular skill shortages that needed



to be addressed either through retraining or getting other people.

All of those issues around the ability to move, to retrain, to redefine work areas or work packages for the employee group, are all very complex in the context of Ontario Hydro. The point we raised in the report was really around that being a critical assumption, the ability to resolve those labour issues to the point where the NAOP could actually be implemented, and that being one of the key elements to actually implementing it.

**Mr Conway:** On page 14 of your report, under the subtitle "Resolution of Labour Issues," you point out that under the nuclear assessment group's preliminary analysis approximately 850 employees could be required to move to fill a corresponding shortfall at Pickering in 1998. You go on elsewhere in this report basically to say that a lot of the assumptions have not been tested or not been detailed to any great extent, including these assumptions around personnel. That's correct?

**Mr Hartwick:** In the report what we've raised is the fact that a number of these assumptions are very critical to the success of the plan. Certainly in our conversations and around the roughly 850 people in the movement, those are issues which have been identified, and were identified, by the nuclear team. What we're saying is that those need to be addressed as to how they fit into the ability to execute the plan.

**Mr Conway:** The more I think about this and I look at your analysis — and yours is a financial analysis — I sit and I think I reflect maybe some of the concerns that people like Mrs Fisher have raised as well. You tell us, and Hydro now tells us pretty bleakly, that they are facing some pretty tough financial challenges, particularly over the short and intermediate term. To be fair, let's just accept that. Then I say to myself that we know from the federal regulator that none of these reactors — even though they may be cited as minimally acceptable and in the view of the federal regulator they can continue to operate. In fact, in some cases they're getting better. The performance is getting better, I think I can fairly say.

1640

So I say to myself, given the financial pressures and the situations we were talking about earlier: that they may be getting to a point where there's no equity left; they're not going to be able to increase rates, in fact they may be under real pressures in the other direction because of the competitive market; they've got personnel problems, they don't have the right mix of people, and they've got to get a better culture — I accept all that, but again, thinking financially, I say to myself, wouldn't a more prudent policy and recovery be to say, "Let's not lay up seven; let's lay up four, five, but let's keep two or three of these assets in production, producing revenue," avoiding some of the headaches that are there, not just financial but environmental? Yes, there's probably going to be some difficulty getting the skill mix right, but you tell me that the NAOP is not going to be without that problem as it is.

From a financial point of view, as someone who thinks the way I just did out loud, maybe an alternative course

here might be not to lay up seven reactors but rather four or five, and keep two or three of these reactors that are scheduled for lay-up in production for a year or two, assuming there's no problem around safety; we've had some testimony from the federal regulator. But from a financial point of view, keeping two or three of those seven in production for another 18 to 24 months, if it's possible under the federal regulatory agency, as it appears to be, would that not be a sensible thing to do from a financial point of view?

**Mr Caine:** The general response is that in our report we identify that the options should be better documented. There were six options that were reviewed and documented — I believe that has been provided to the committee — which included these options of doing different numbers and what the positives and negatives were in terms of capability of achieving that and so on. Ken, you looked at that.

**Mr Conway:** I remember the options, and correct me if I'm wrong here, but I thought the option basically was they did an analysis of trying to keep the 19 and they said the chances of doing that were I think nil. So it was either 19 or 12, but I don't remember there being a middle option of, say, 14 or 15. The reason I mention that today is thinking financially. With your testimony this afternoon and some of what we got this morning, I just see this corporation right at the cliff on the financial ground. We're asked to look at this recovery plan. Surely there may be a more prudent middle course, if only for even a couple of years, because a lot is going to happen between now and the year 2000. I'm thinking financially about rate freezes and the competitive market and SDRs and debt-equity ratios.

**Mr Hartwick:** Perhaps to react, I think within the six options that were presented there were some variations, almost by four-unit pack of the facilities. In looking at it, I'm not sure whether you can look at it from a purely financial perspective. We were asked to look at the financial analysis that was done in the supporting documentation. Other issues such as the ability of the appropriate number, of the right skill of people to do multiple or keep some units running and others down, the issues around having different standards between units, those are all technical issues, in our view, which would need to be better addressed probably by Carl and his team.

**Mr Conway:** But committee counsel reminds me that on page 11 of your report, it says: "NPAG" — that's the nuclear power assessment group — "presented two options to the board on August 12," that is, recover all 19 units or lay up seven and work on 12. I guess what I'm asking you is, in any of your work, did you see, or in the absence of seeing it, is it foolhardy for this committee to think about maybe a third option that says there's a middle ground, someplace between 12 and 19, thinking financially, assuming the safety issues are manageable?

**Mr Hartwick:** One of our recommendations dealing with that specific issue was that there be a documentation of the options that were considered; not just the two, but other options that were considered as part of the NPAG

assessment. That was done and presented to the September 26 audit finance committee. I think the document has been provided here, which is the basis for the recommendations providing for the nuclear asset plan, and that set out six options which then dealt with keeping Pickering A going and not Bruce. So it dealt with some variations.

**Mr Conway:** But as committee counsel tells me, it's after-the-fact documentation. The decision was made on August 12. I'm trying to get my head around financial issues. You're not here to talk about the technical and safety issues, I understand that, but there are huge financial obligations here. We have some responsibility to the taxpayers of Ontario and the ratepayers of Ontario Hydro to get as good a level of comfort — I'm telling you, I want you guys to tell me more directly than you're telling me this afternoon, is it prudent for this committee to think about a third way, something between 12 and 19, so the kind of nightmare that I see coming financially in six to 24 months is reduced to some reasonable extent?

I come back to my question: Did you ever find, or is it prudent for us to go looking for, an option that says, "We accept that you can't keep the 19 going, but 12 is too far the other way," that a prudent financial and safety and operational course might be to look at keeping 14 or 15 of these reactors operational, at least until the year 1999 or 2000, so we can get a better picture of other things and so we can give ourselves a little bit of financial room in which to manoeuvre?

**Mr Caine:** At the time of our review, we did find that other options had been considered but simply not documented and provided to the board at the time of the August 12 board presentation. Those other options, the six options, then were documented and presented by September 19. That was the documents' date. It was quite clear in our examination that they had been examined and had been examined in some depth.

**The Chair:** Thank you, Mr Conway. If it's absolutely critical —

**Mr Conway:** Have you done any analysis of that kind of middle course that I've talked about or are you aware that anybody has done that analysis of that middle course, someplace between 12 and 19 reactors? Are you satisfied that it's been done or are you aware that it's been done?

**The Chair:** That's the question.

**Mr Hartwick:** Perhaps again I'll refer back to the documentation that was prepared by the NPAG team and presented to the September 26 audit committee, which set out six options. That is one of the recommendations of our report, that the options that were considered be appropriately documented and assessed, including not only the cost but also the practicalities through safety and —

**Mr Conway:** You're not satisfied at this point that that work has been done —

**The Chair:** Thank you, Mr Conway. Counsel will have a chance to ask that in a couple of minutes. Mr Laughren.

**Mr Laughren:** I'll pass.

**The Chair:** That will complete the questioning. Mr Power, do you want to ask some more questions? That

will save you having to go through — Mr Conway is right here.

**Mr Power:** I might as well follow up on Mr Conway's question. The question is relatively simple: Are you satisfied, for example, that the option of maintaining 17 units has been fully evaluated and considered through all the various risk scenarios? Are you satisfied that option has been properly evaluated and documented to your satisfaction and is appropriately discarded?

**Mr Caine:** We did not conduct that examination. Our review was of the financial support for the technical options that were considered feasible and viable by the NPAG team, and that's what our report covered.

**Mr Power:** So you're telling me that the examination of these other alternatives to ensure whether or not they are satisfactory in their own right, or the decision to discard them, is beyond the scope of your retainer?

**Mr Caine:** A technical evaluation is beyond the scope of our evaluation, yes.

**Mr Power:** So you can't express any opinion to the committee here as to whether or not it might be prudent to evaluate operating 17 or 16 units? Is that what you're telling me?

**Mr Caine:** We cannot express that opinion at this point.

**Mr Power:** Would you be expressing that opinion as part of your audit at the year-end?

**Mr Caine:** We would express an opinion on the financial statements of Ontario Hydro as to whether they fairly present the financial picture based on the decisions that are taken by the duly constituted board and management of that organization. The responsibility of an auditor isn't necessarily to say, "Maybe you could do this or that or the other thing." We look at what you did do, what you have done and how much it's worth.

1650

**Mr Power:** Yes, I understand. In other words, you won't ever express an opinion on whether 16 or 17 units should be run. That's Ontario Hydro's decision, that's beyond the scope of what you'd be doing. Right? You will simply accept the final decision.

**Mr Caine:** It is at its heart a technical and financial question.

**Mr Power:** Okay, and it's beyond your scope.

**Mr Caine:** Yes.

**Mr Power:** A couple of other questions, if I may. Just following up on some of the questions about the consolidated statement of changes and the cash position, I must admit I was confused and I may have missed this. On page 46, as I see it there, the cash from the operating activities is \$2,228 billion. If I understand correctly the investment activities, down below there is a negative \$735 million, which gives me roughly cash available for financing activities of \$1,493 billion. Does that make sense to you, gentlemen?

**Mr Caine:** Maybe I'll ask Ken to take it through. It isn't that simple.

**Mr Power:** As you can tell, we've sort of grappled around here and I'm trying to — as a layperson it is —



**Mr Caine:** What this tells you is that in general terms they're getting a lot of cash out of their operating activities and they're using it to retire debt. That's what it tells you, in the order of \$2.2 billion. They had other things they had to use the cash for, but they used that cash effectively to retire debt.

**Mr Power:** I'll just see if I can understand this. What is, then, the cash available for financing activities excluding going to the bond market, your revenues from your customer base?

**Mr Caine:** We'd have to provide that separate calculation. This is net of a bunch of things.

**Mr Power:** If you could provide that separate calculation, then if you could add to that what the long-term debt due in 1996 is — I understand from note 9 that it's \$2.704 billion. If you could show me the difference between what that income was versus the debt due, I think that was the question that was trying to be brought out earlier.

**Mr Hartwick:** That was just basically for clarification or reconciliation of the note 9 change in debt number through to the cash that was generated through the operations of the entity and the reconciliation back through to the cash flow statement.

**Mr Power:** Let me rephrase it as I understand it. People are trying to understand what Ontario Hydro's cash flow is. As you've very ably pointed out, that's the key issue here.

**Mr Caine:** It is.

**Mr Power:** What the cash flow in the example year 1996 would have been, when you reduce what your investment activities would be, it leaves you with a net cash flow position to do with what you want.

**Mr Hartwick:** We term that the free cash flow that's available to retire debt, invest.

**Mr Power:** That makes sense. Okay, I'm with you there. Then the question is, once you have that free cash flow, what was the planned long-term debt due in 1996? As I understand it from note 9, from my notes here, it's \$2.7 billion. What I seem to come up with is a significant difference between the cash flow and the long-term debt due planned in 1996. Is that a fair statement?

**Mr Caine:** Yes, that is a fair statement. What this and every other corporation this size does is use treasury operations to balance its flow of cash needs against available cash saying, "That's what's callable in the year." Because it tends to be higher-interest-rate debt and we have a low-interest-rate phenomenon, it's very much in their interest to roll that over and reduce the overall net interest rate applied to this debt position. That's what they do.

**Mr Power:** That sort of makes sense. If I understand you correctly, by saying you use your treasury capabilities, basically you roll over debt.

**Mr Caine:** Right.

**Mr Power:** In this case, if there's a deficiency between the free operating cash and long-term debt due, you've really got to make it up on the bond market somehow.

**Mr Caine:** Yes, you roll it over in the bond market. If you look on page 54, you'll see that the weighted average

interest rate of the debt has come down by 0.4% over that period. It doesn't sound like much but it's huge in terms of its implications for the cost flow of this organization, every point of per cent.

**Mr Power:** That makes sense to me. Then if I understand it correctly, you've got less free cash available than you have the ability to pay off your planned long-term debt due in the example year 1996 we have right now.

**Mr Caine:** Yes.

**Mr Power:** Now I roll forward in time to the NAOP and the implications of that. Is it fair to assume that your free operating cash position's going to get worse, for lack of a better expression, in future years with the costs to be incurred with the NAOP?

**Mr Hartwick:** With all things being equal as far as your basic operating expenses and other things that would consume cash, sure, if you're going to layer on an additional set of expenditures, that's going to impact your free cash flow to retire debt.

**Mr Power:** Which would suggest to me that in the next couple of years, based upon what we know of Hydro, my free operating cash is going to remain around here, but my debt load's going to continually increase. I think some of the flowcharts have shown us that.

**Mr Caine:** If your free cash flow stays at a level of, say, \$1.5 billion, just for the sake of argument out of here, and the amount that you need to finance the plan is \$1.5 billion times however many years, then what that would mean in a general sense, as one of your options, is to cease the paydown of debt and continue with the rolling over of debt to reduce the interest rate coverage, assuming we stay in this interest rate environment we have, this favourable environment we have right now, to reduce the overall costs of the organization.

**Mr Power:** I think I've satisfied some of the confusion that went around that. I'll take you up on your offer, though, if you can just elaborate that in writing so we can circulate it around. You can tell there are some questions about that.

**Mr Hartwick:** Yes. That certainly is an analysis that the finance group at Hydro I'm sure has. Depending on your preference, we can either have them provide it to you or we can.

**Mr Power:** I'd prefer it out of your company's letterhead, if you don't mind.

**Mr Conway:** I second that motion.

**Mr Power:** An unrelated area but another area of confusion in my mind: Generally speaking, what does "retained earnings" mean? There's some confusion around that and I'd appreciate what advice you can give me on that.

**Mr Caine:** That's a good question. Some people ask why retained earnings isn't equal to cash. It is the net equity position. In this case there are no external shareholders other than the shareholdings or ownership position by the government of Ontario.

**Mr Conway:** We've noted that.

**Mr O'Toole:** There are no shares.

**Mr Caine:** Yes, there are no shares. Retained earnings is the residual between assets and debt and other liabilities. That's the simplest way to explain it.

**Mr Power:** That's sort of simplistically how I understand it. I'm just pleased to know I'm on course.

**Mr Caine:** That's about right.

**Mr Power:** I'm getting comments over here that when you get accountants and lawyers agreeing, we should all be nervous. But putting that aside, would you agree with me that as a general principle retained earnings is a positive matter, it's a positive on the books?

**Mr Caine:** Retained earnings, being the residual value of the asset versus the debt, if it is a positive amount, is looked upon in a positive way in terms of flexibility for the future, an additional indication of flexibility for the future.

**Mr Power:** Is it acceptable to have a negative retained earnings balance?

**Mr Caine:** It happens. Boards of directors looking at that situation would want to know how it turns to a positive.

**Mr Power:** Is it an issue of considerable concern for a corporation if it has a negative retained earnings balance?

**Mr Caine:** It is certainly not a matter of rejoicing.

**Mr Power:** You're being far too nice about this. Let's face it, it's a serious issue, isn't it?

**Mr Caine:** We have clients that have negative retained earnings situations and they've managed out of that. I might refer to one other client that Ken and I share, and that is Algoma Corp. It had a negative retained earnings situation and they seem to have dealt with it. But it certainly is a matter to be looked at.

**Mr Power:** That's the exception to the rule, though, isn't it? In your experience you've mentioned one.

**Mr Caine:** I can't comment in terms of the rule, other than the idea of having negative retained earnings is something that you'd look at with concern and something that you want to turn around. We would, as auditors, expect that that plan would be there to turn that situation around.

1700

**Mr Power:** It's a fairly rare experience, though, for you. It is for everybody else I've talked to in your profession. I can tell you, we've talked to a lot of people and they all come back with the same consistent statement, so unless you have a unique perspective on this, which I'm more than willing to listen to, you're alone.

**Mr Caine:** The general rule is you look for a positive equity position in most of the companies that we audit, which are private sector companies. That is my principal background and that of Ernst and Young, so that's the common situation. The common, accepted business practice is to move towards a positive retained earnings position.

**Mr Power:** In the example you gave, I don't think it's unfair to characterize it as somewhat akin to an insolvency situation. I can't recall the facts off the top, but it was a company that was in very difficult financial circumstances at the time. Correct?

**Mr Caine:** In terms of the comments, we look at the ability of the organization to continue as a going concern and at its ability to service its debt, at the free cash flow, and a series of other indications in the context of that corporation. It really isn't a one-size-fits-all audit, even though we use the same processes and techniques. It really does have to take into account the unique circumstances of every situation, which we do in this case and —

**Mr Power:** You've ducked me nicely on this, but maybe I can just bring you back. From what I'm hearing, the free cash flow is limited, the debt will increase with the NAOP quite significantly, and I think we're all in concurrence that a negative retained earnings balance is generally an unacceptable state of affairs. In your language, if I may paraphrase, you'd want to see that turned around. How fast would you want to see that turned around?

**Mr Caine:** The corporations we are involved in look to see the equity position in a positive sense. For example, if you're in a biotech or a big investment situation, you could see negative retained earnings but you'd have a significant equity position in there to support the investments. So coming back to it, yes, we would look to see the equity of the organization appropriate to its mandate, the environment it sits in, whether it's competitive and how it's expected to get its money.

**Mr Power:** Can you give some guidance to the committee as to, in the particular circumstances of Ontario Hydro, given your 90-year experience, given the work that you just did, when we should reasonably expect there's to be turnaround on Ontario Hydro books if they're going to have indeed a negative retained earnings balance?

**Mr Caine:** There are three elements to the answer. First is the business environment within which this organization will have to operate, and that includes its structure, its regulatory environment and so on. Second is the competitive environment it's expected to operate within: What is the rate for the power and how can it be assured of achieving its costs? The third are the structures and the agreements that it arrives at in carrying out its mandate and the way it's managed.

**Mr Power:** My last question is, if the white paper came out tomorrow, that might fundamentally affect your view of how soon you'd want that paid off, wouldn't it?

**Mr Caine:** As I said before, there will be few more interested readers of that document than Ernst and Young.

**The Chair:** Mr Caine, will the NAOP add anything to Hydro's equity?

**Mr Caine:** The NAOP, as it's currently provided, involves a substantial expenditure of funds once these are approved by the board of directors. There a bottom-up process that's under way right now, so that's the process that's under way. Once that happens, we'd be able to give you the information, the specific amounts.

**The Chair:** I'm sitting here a little bemused. Your answers have left me in a quandary about what happened on August 12. Help me piece together what has happened in terms of your testimony. On the one hand you've indicated that there's a technical issue and you're not expressing



any competency in terms of the technical choices. Mr Conway has spent some time talking about several options that were put before the board and wondering out loud whether one should be looking at perhaps 14, 15 or 16 reactors as opposed to more or less. So the technical side is left questionable. Then I have your response to indicate that in the areas of the financial viability of the plan, or whatever is happening, there are still ongoing discussions, there are still continuing reviews. Upon what basis has any decision been made?

**Mr Caine:** The question as I understand it is around the day of August 12, as to what substantiation or information was there for the board to make that decision.

**The Chair:** You can start with that.

**Mr Caine:** We have been provided with a package that was provided to the board at that point, as the basis for our review. There was also a fair amount of other information provided to that board leading up to that. We know bits and pieces of the information that was provided.

**The Chair:** Are you comfortable that at that point the board was in possession of sufficient information in terms of finances upon which to make a decision?

**Mr Caine:** I'll have to come back to the board's decision, which required that an assessment of those finances be done and that we did. Our report clearly outlines a number of areas where improvements were needed in the substantiation of the documentation.

**The Chair:** So the board was not fully in possession of all the information it needed to make a definitive decision.

**Mr Caine:** They decided to ask for due diligence and that's what led to us being asked to take on this engagement.

**The Chair:** So the board did not have sufficient information to satisfy it at that point to make a definitive decision. Would that be true or not?

**Mr Caine:** I cannot answer the question as it's stated.

**The Chair:** Then let me withdraw that question and put it to you another way. How do you react to the comments made by Ms Clitheroe that are in the minutes of the board, the concerns expressed?

**Mr Caine:** We've had a number of discussions with Ms Clitheroe over the course of doing our examination for the preparation of this report, so we were able to find out from her what her concerns were and we were able to use that as part of the evidence that came in to the basis for our findings.

**The Chair:** Were they reasonably minor concerns?

**Mr Caine:** I guess I'd have to ask Ken to comment on that.

**Mr Hartwick:** Coming back to the board decision itself, which requested that an additional financial review or assessment be done of the financial elements of the nuclear asset plan, certainly some of those were driven by the discussion at the board that they required that additional due diligence. It's something that we view as being common in the other companies we deal with, that on a major investment decision, additional due diligence would be done in the area of financial information.

**The Chair:** So financially it would be fair to say to the layman that what I see here is a picture of a board that's saying, "Looks like everything is okay, but let's take one more look at it." Is that what you're painting for me?

**Mr Hartwick:** I think what the board —

**The Chair:** Is that what you're painting for me as the auditor? Would that be fair?

**Mr Hartwick:** What the board decision reflected was the board proceeding for approval of the plan, subject to the review of the financial information. We weren't there for the discussion, but it will reflect that they wanted the financial information examined and then subsequently asked us to do that.

**The Chair:** Mr Hartwick, if you were sitting there, would you have said, "I have enough. That sounds pretty good to me"?

**Mr Hartwick:** I wasn't sitting at the board, so it's a question that I don't think we're in a position to answer. We'd certainly react more to what the board instructed us to do.

**The Chair:** Would you have advised the board to make that decision?

**Mr Caine:** Again, they asked us for our advice with respect to the financial support. As outlined in our report, we've advised them, Ontario Hydro's board and management, to get additional information before commitment of the funds. That's what's in the report. That's what our advice is. It's not whether it would have been; it is that advice.

**The Chair:** I should not be concerned, then. As I take a look at the testimony, it seems as though the question raised by Mr Conway of whether you do 12 or 14 or whatever is a technical thing that no one seems to really know an awful lot about, but that's okay. The financial thing is: "Well, it looks to be okay, but let's proceed. We'll do some more studies and we'll have ongoing conversations." In the meantime, the recovery plan seems to be unfolding, does it not?

1710

**Mr Caine:** The recovery plan, as I understand the board of directors' direction, has been approved in terms of its direction and the strategic and tactical direction of which units and what they expect to happen. What they asked for in addition to that was due diligence, of which this is part.

**The Chair:** In your opinion, is the plan currently being implemented in any part?

**Mr Caine:** From what we've seen, the plan of NAOP is under way.

**The Chair:** A final question in that regard is, would you think Ernst and Young would consider a going concern note to be issued in regard to the 1997 financial statements?

**Mr Caine:** We're required under professional standards to examine the evidence that would substantiate maintaining a going concern basis for any set of financial statements, and certainly anything where there are significant uncertainties as outlined in note 19 to these financial statements, that's expected and that's what we'll do.

**The Chair:** Would your outward countenance change if tomorrow morning the government were to withdraw its guarantee?

**Mr Caine:** I would certainly be interested in that decision, were it to be made.

**The Chair:** Would that get your attention, as an auditor?

**Mr Caine:** It certainly would get our attention.

**The Chair:** And what does that mean?

**Mr Caine:** We would like to look at the impact of that with respect to the ability to continue to roll debt, the ability to retain a debt rating. The key thing is, what is the debt rating? Those are done by — you talked about “cold, hard.” That’s a cold, hard review.

**Mr Conway:** Cold heart?

**Mr Caine:** Cold, hard.

**The Chair:** It’s a theological term.

**Mr Conway:** Among other things.

**Mr Caine:** It’s beyond accounting.

**The Chair:** The final question for you is, in your opinion, because you may not be able to speak to it technically, is the recovery plan financially sound?

**Mr Caine:** We did not examine the financial soundness of the recovery plan. We did identify a number of pieces of information that will be required in order to be able to estimate what the full cost of that plan would be. Once that information is in, we’d be in a position to know. We expect a lot of further evidence to be available to us, as the auditors, by the time we close off these accounts.

**The Chair:** Mr Caine, I thank you very much for your attendance upon the committee, and Mr Hartwick for your evidence. I hope that you’d be available to the committee if there’s further questioning that may flow from this.

**Mr Conway:** Mr Chairman, can you make sure that these gentlemen’s superiors get a copy of this videotape of their performance? Because I’ll tell you, if Elvis Stojko is this good at Nagano, we’re going to win a gold medal. You guys are good.

**The Chair:** We’ll have that passed along without prejudice to the committee.

We thank you very much. You are excused from the stand for now.

For the members of the committee, before we close off, I might remind you that tomorrow morning at 8:30 we will leave here for the Pickering station. Then, in the afternoon, the public hearings will be held at 2:30 pm at St George’s Anglican Church, at 51 Centre Street South in Oshawa. There are something in the order of 14 to 20 deputants so far on the list. Some are clustered together, to be of assistance to them and to us.

**Mr Conway:** We don’t need robes for the church?

**The Chair:** I do but you don’t. As long as you know how to light candles, we’ll be all set. Other than that, I think we are all set.

For those who are watching television, may I remind them that we now leave the airwaves for about a week and a half. We will be returning the week of the 17th. I know the number of viewers of this committee is growing by leaps and bounds every day. We will return that week. I’m

told by Donna that we have to share that week with another committee. Unless we can find the pictures of the last party, we’ll have to defer to them and just come back and forth every other day, but we will return that week.

Rob, there’s one other item you have to raise before we go?

**Mr Power:** Mrs Johns has a question.

**Mrs Johns:** I have two points of order. I assume Hydro is in the crowd — if not, they’re watching on the TV — so maybe they can get this information for us.

**Mr Conway:** Hydro usually is the crowd.

**Mrs Johns:** Hydro usually is the crowd, so Hydro, are you writing this down?

We received this from Ontario Hydro yesterday — it’s dated November 3, addressed to Donna Bryce, and it is with respect to five details that I believe Ms Fisher and I asked for. In number one, they gave us a long sheet that talks about the phased recovery, the NAOP-based case or 12-plus units.

Under the heavy water plant layup and infrastructure, I’m interested in why \$9 million is being expended on that from 2000 through to 2009, if we are actually laying that up, closing it up and all those things.

The second thing is in the fourth section about the decommissioning report on page 8. It talks about used fuel disposal and the unit cost of disposal. It’s \$140 per kgu. I’m not exactly sure what that terminology is, but that is substantially less than America, where it’s \$330, or \$1,540 in Finland, \$750 in Sweden. I’d like to know why the difference in that dollar value. Is it because we’re on a Candu reactor, or is there some other reason for that to be the cost? It seems way out of whack. If I could have that information when we return, I’d appreciate it.

**The Chair:** Ms Johns, that is not a point of order, but it is a reasonable request and we will indeed on your behalf make that request to Ontario Hydro. Hopefully we’ll have it by noonhour tomorrow.

Is there any other business?

**Mr Power:** Just to let you know that we have received and Donna will circulate in a moment the summary report of AECB staff to the board. This is not the full report that’s following next week that is some several inches thick. For the purposes of the next two days, it’s not site-specific, but there are a couple of pages in there worth reviewing. In essence, AECB concludes with Ontario Hydro’s IIPA findings. Like I say, from my brief review it doesn’t add too much more. If you have a chance, I’d review it in the next two days, but the next two days are, as we discussed, site-specific. Those are my only comments, Mr Chair.

**The Chair:** Thank you very much, Rob. To remind us, tomorrow we adjourn to Pickering and then on Thursday this committee will travel to Darlington for its site visit as well. Tomorrow afternoon we will hear deputations that will take us up to the early to mid-evening.

Any other business for the committee? If not, this committee will stand adjourned until 8:30 tomorrow morning.

*The committee adjourned at 1718.*



## CONTENTS

Tuesday 4 November 1997

Ontario Hydro.....	H-465
Mr Pat McNeil	
Mr Rick Machon	
Ms Malen Ng	
Ms Eleanor Clitheroe	
Township of Bruce .....	H-494
Mr Dick Joyce	
Ernst and Young .....	H-498
Mr Brian Caine	
Mr Ken Hartwick	

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Première session, 36<sup>e</sup> législature

# Official Report of Debates (Hansard)

Wednesday 5 November 1997

# Journal des débats (Hansard)

Mercredi 5 novembre 1997

Select committee on  
Ontario Hydro nuclear affairs

Comité spécial des affaires  
nucléaires d'Ontario Hydro



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## LEGISLATIVE ASSEMBLY OF ONTARIO

SELECT COMMITTEE ON  
ONTARIO HYDRO NUCLEAR AFFAIRS

Wednesday 5 November 1997

## ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

COMITÉ SPÉCIAL DES AFFAIRES  
NUCLÉAIRES D'ONTARIO HYDRO

Mercredi 5 novembre 1997

*The committee met at 1434 in St George's Memorial (Anglican) Church, Oshawa.*

**The Chair (Mr Derwyn Shea):** Let me bring the select committee on Ontario Hydro nuclear affairs to order. We have a long afternoon and a bit of an evening before us as well.

A special thanks to the members of the Atomic Energy Control Board for the briefings this morning, and also to Ontario Hydro management and staff.

As you know, the committee had chosen to meet here at a midway point because of a number of deputations that are coming in both from Darlington and Pickering. This was seen as a reasonable meeting point, although I have just very quickly glanced at comment from one of our deputants who, I think fairly, points out some concerns about location, and I understand and respect that point of view. But at least I think we've made a case of why we are here and the interest we have in hearing from the residents surrounding both of the facilities. It is very important.

I'd also like to thank Mr Ouellette — we are in his riding — and Mr O'Toole, who is also a sitting member nearby, for his courtesies and his welcome into this community. We appreciate that very much.

Are there any comments you want to make, Mr O'Toole, before we begin?

**Mr John O'Toole (Durham East):** I'd just like to welcome members to the community. We're in Jerry Ouellette's riding, and I know Jerry would like to observe the behaviour going on here today. It's good to see the community involved, and Mayor Arthurs, and I'm pleased to hear the response from the community.

**The Chair:** There are a number of deputants, as I mentioned. There are different time frames for some. There are a number, as you'll notice, as we get towards the latter part of the day that have voluntarily clustered together so they can make a presentation, facilitate their presentation and give a little more time to the committee to ask questions. Whatever time is allocated, whether it be 30 minutes or 10 or 20, includes the question-and-answer period, and I will as usual be reasonably crisp with the gavel.

## TOWN OF PICKERING

**The Chair:** Let me begin with welcoming to the witness stand His Worship Wayne Arthurs, the mayor of

Pickering. Mr Mayor, if you would be good enough to come forward, and for the purpose of Hansard, although I have introduced you, if you would be good enough to mention your name so we have it on the record.

**Mr Wayne Arthurs:** My name is Wayne Arthurs and I am the mayor of the town of Pickering.

Mr Chairman and members, thank you very much for the opportunity of presenting before you today, and to Mr O'Toole, whose riding is within the regional municipality of Durham. We've had the pleasure of sitting together on regional council for a period of time.

Ladies and gentlemen, good afternoon. For the record, I have served on Pickering council for some 15 years now and have been the mayor and a regional councillor for the past nine years. I'm here to represent the views of the residents of the town of Pickering and my council.

Before I go any further, I would like to point out that while we all know why I am here in respect to speaking to the Pickering nuclear generating station, I understand why this committee chose to convene this meeting in Oshawa. Surely, though, this committee must recognize that the serious issues surrounding the continued operation of the Pickering nuclear station are of some considerable interest to the residents of its host community. A more appropriate location for today would have been in Pickering, yet here we are in Oshawa.

Against a background of an ever-increasing list of incidents directly related to the safe operation of the Pickering station, all of which have contributed to a growing mistrust, the residents of Pickering and their elected representatives believe they have a right to expect that the government of Ontario would be keenly interested in these concerns. At the very least, they have a right to express these concerns in an accessible location within their own community.

While one might consider the location of this meeting to be a small issue when contrasted against the mandate of this committee, it is one that only serves to increase the public's perception that their voices are not being heard. You should know that there is a complete collapse of public confidence in Ontario Hydro in respect to its nuclear operation within the town of Pickering. The residents of Pickering don't know who or what to believe or whom or what not to believe.

The simple fact is, Ontario Hydro cannot be counted on to provide answers. A cursory review of recent history is evidence enough that there continue to be problems at the



Pickering station and that the list of questions needing answers is growing exponentially. I would draw your attention to the attachment within the submission referencing the Durham Emergency Measures Office Incident Report to give you but an example of the number of incidents being reported to our constituents. That only addresses the period from mid-1995 until mid-1997. If we were to step back to December 1994, you would see the magnitude of the concern when the major incident occurred at that point in time.

How do we get the questions on the table and how do we get the answers when Ontario Hydro and, might I suggest still at this point, the provincial government seem intent on maintaining a fortress mentality? The barricades remain up and we are left knocking on the door. We're left to try to sort fact from fiction. It almost appears that there is a considered information management plan in place that is designed to keep the facts from the public. This fortress mentality leaves us all to deal with the negative impacts that are the result of conjecture, rumour, misinformation and an increasing number of unattributed information leaks.

Without question, the overwhelming need to provide a vehicle that will result in clear answers has to be a priority of the government of Ontario. At this critical point in time, when the entire future of nuclear generation is under review, surely the need to open and sustain a meaningful dialogue with all the stakeholders has been priority number one.

To that end, as the mayor of the town of Pickering, I met with the then Minister of Environment and Energy, the Honourable Norm Sterling, on June 16 of this year. In that meeting with the council of the corporation of the town of Pickering, I urged Mr Sterling to undertake and initiate a broad public review of all the issues surrounding the continued operation of the Pickering station. I was not alone in this request. I had the support of my council and of numerous community-based organizations which have been active in reviewing various aspects of the operation of the station.

When I had not received a response from Mr Sterling in early July, I wrote to him reinforcing our need to have that response. Again that communication merited no response. Subsequent communications, including a letter dated September 10, also met with no response.

I must say that recently I was advised that a letter sent to me in the latter part of August referencing the establishment of this committee as a result of Mr Andognini's report was presumably the response to my request for a broad public review. I certainly didn't interpret it as being such. You'll find the various correspondence attached from those months both to Mr Sterling and to his successor.

**1440**

I somehow can't imagine that Mr Sterling felt that my requests were completely without merit, yet I find myself before you today literally making that same request while incidents continue to occur at Pickering, rumours continue to circulate and questions are left unanswered. I don't

need to remind the members of this committee of what transpired in August this year, but I can't help thinking that if Mr Sterling had demonstrated a sincere interest in our request for a review and subsequently acted on it, the impact on the residents of Pickering of Mr Andognini's report to the board of directors of Ontario Hydro somehow might have been lessened. Had Mr Sterling responded in the affirmative, the residents of Pickering would have had a forum through which to express their concerns, ask their questions and get their answers.

I am not here today to conduct a lengthy review of past history. You've had that already. I am here to let you know that we have taken an initiative that hopefully will help us to get that positive response from Queen's Park. In a bylaw passed by my council, we have authorized the following question to be placed on the ballot of the regular municipal election to be held next Monday. It will read, "Are you in favour of the Ontario government holding a full public review under the Environmental Assessment Act of Ontario prior to any decision being made to restart the Pickering A nuclear generating station as well as during the continued operation of the Pickering B generating station?"

I fully expect to get an overwhelmingly affirmative response from my constituents to this question. I fully expect that the individuals who are elected to serve on the next council will continue to demand action from the government of Ontario.

It is clear, it is simple: Pickering demands an independent review wherein all the questions can be asked and all the answers received, an open review wherein all interested parties will have an equal opportunity to have their voices heard.

Ladies and gentlemen, time is ticking away. Confidence in Ontario Hydro is at an all-time low and we are left to sort fact from fiction. We need leadership from the province, we need clear direction from the province and, above all, we need to have the assurance that we will be heard.

While we are on the subject of time, I want to share with this committee some information that has come to me directly. Perhaps, given the subject matter, we should spend a few moments synchronizing our watches. The information I have been given is specific to the infamous year 2000 problem. It deals with the age and condition of the computer systems and their programs in use at the Pickering station. I am told that the year 2000 problem, if not solved, could result in system failures.

Perhaps even more disconcerting is the fact that the information I have tells me that the year 2000 problem was raised earlier this year, early this summer, as I understand it, with the board of directors and senior management of Ontario Hydro and they are fully aware of it. I am not aware that any substantive action has been taken to address the problem as of this date.

I strongly suggest to this committee that they recall Mr Farlinger and ask him when and how Ontario Hydro intends to deal with the year 2000 issue. Time is tick, tick, ticking away. I thank you for your time and interest and I look forward to your questions and comments.

**The Chair:** Thank you very much, Mr Arthurs. We appreciate your deputation. There are 10 minutes for each caucus and we will ask the questions in rotation. I will begin today with the Liberal caucus.

**Mr Sean G. Conway (Renfrew North):** Thank you, your worship. I take it that you still have no communication from the Minister of Energy to your letter of some months ago about the matters raised.

**Mr Arthurs:** The only response I have received was a letter in late August which I assume was merely a recognition of the establishment of this committee. The only way I could establish that it was intended for the purpose of response to my earlier correspondence was from the Office of the Ombudsman because our council had asked the Office of the Ombudsman to intervene to seek support, and the response coming back was, "The letter you received in August was the minister's response."

**Mr Conway:** Your submission has about it the general tone of exasperation. Would that be a fair —

**Mr Arthurs:** Yes.

**Mr Conway:** You have been around Durham region and Pickering for some time, I take it?

**Mr Arthurs:** I've been a Pickering resident since 1975 and have served on council for 15 years.

**Mr Conway:** How would you characterize the relationship between Ontario Hydro at the Pickering station particularly and the community of Pickering over the course of that 15-year time that you've been on council?

**Mr Arthurs:** I think there was a tremendous amount of early confidence in the professional operation of the plant, the expertise that one assumed was there operating, managing, running the facility, the senior management, I guess, of Ontario Hydro, although people didn't think of that. They thought of the plant. People who live in our community work there. We trust their judgement. We know their families are there.

During the past number of years, and I would suggest starting in particular in December 1994, that confidence began to erode quickly. I would suggest that as of this summer, as I have said, it is at an all-time low, if not entirely collapsed. It is the topic of conversation at the doors in this municipal election. People want answers. They are not suggesting that they are afraid for their health or safety today in an imminent way, but they are concerned. They want answers, they want the truth and they want a process whereby there are people at the table they can identify with.

**Mr Conway:** You've told me that over the last 15 years the relationships were pretty positive, and quite positive in the beginning of that 15-year cycle, but they have worsened appreciably in the last two or three years. What explanation, from your point of view as the mayor, would you have for that positive relationship deteriorating? What kind of analysis have you made as to why it has gotten worse? Are there some changes in the personnel down there?

**Mr Arthurs:** There certainly have been changes in personnel coming rapid-fire in the past couple of years. The number of incidents has increased. Hydro's response

to those, or lack thereof in many cases, until very recently was: "Everything is okay no matter what occurs. Don't worry. We'll take care of you. Everything is all right. It's not a problem."

**Mr Conway:** Did you see the CBC television news program of about 10 days ago, two weeks ago?

**Mr Arthurs:** I had the opportunity to review it on video. I didn't see it when it was presented.

**Mr Conway:** Has that program given rise to much comment around the doors you've been visiting in this municipal election campaign?

**Mr Arthurs:** The doors I have been at haven't made much specific reference to any particular incident or documentary or news release. It has been more of a general statement of concern, wanting access, wanting a process, not wanting to abandon the community out of fear in any way nor to sit back and simply say that things are still okay. People want access. They want a process.

**Mr Conway:** Thinking about issues like fire protection and emergency preparedness, how would you characterize your confidence level, as a municipal politician in Durham region, about the state of emergency preparedness and fire protection?

**Mr Arthurs:** I would suggest, based on the information we have, that the plant in and of itself is inadequately prepared for any major fire-related activity. They are extremely dependent upon the ability of the local fire service to do that on their behalf.

More particularly on the emergency preparedness issue, I am exasperated — the word you used earlier — in my dealings with Ontario Hydro, with Emergency Measures Ontario in the emergency planning area. Some time ago — I can't recall the date, but we'd certainly be happy to provide the documentation — I met with Ontario Hydro, with Emergency Measures Ontario, with the CAO of the region of Durham, Mr Garry Cubitt, to impress upon Ontario Hydro their responsibility for emergency planning in Durham region because we have nuclear facilities as, it's been referred to, bookends within the community. Their response was a head scratch and saying, "Isn't your mandate the region?" so I'm having difficulty establishing what the business case would be for us to be involved in emergency planning.

1450

**Mr Conway:** You've anticipated my next question: What has been your sense about the proactive involvement or other kinds of involvement from the Ministry of the Solicitor General, the Emergency Measures Organization, the fire marshal's office to issues like fire protection and emergency? Do you ever get a call from the fire marshal saying, "Your worship, we'd like to go and have lunch and talk about how we might improve the fire protection issues around these nuclear stations?"

**Mr Arthurs:** I'd suggest, unless it's been initiated from within or as a result of an incident, that it has been for the most part non-existent.

**The Chair:** Thank you. I've shaved it down just a touch because I was a little too generous with time and I



knew you'd pick me up on that one, so I thought I'd do my mea culpas before you got to me first.

**Mr Floyd Laughren (Nickel Belt):** I'm concerned about a number of things. I wondered, since I don't live even anywhere near this community, if you'd help me out. You talk about "rumours continue to circulate and questions are left unanswered." What kinds of rumours circulate presumably about Pickering A, perhaps B as well?

**Mr Arthurs:** Community rumours. Sirens go off onsite on occasion, which is an internal activity. Does that mean, the rumour goes out, it's a complete evacuation? There's a non-nuclear incident onsite. I recall not all that long ago a fire situation. The bells go off, the whistles go off, an employee or two or someone calls home to say, "Look, we've had a little incident there." Suddenly it's around the neighbourhood, like, "We've got an evacuation going on." They escalate quickly. They can move around the community quickly on occasion.

**Mr Laughren:** I think you implied that there wasn't concern for community safety. Did I hear you wrong?

**Mr Arthurs:** I don't think there's a concern day to day for the imminent safety of the community. It is a sense that it's not a benign industrial facility. People have been comfortable in the past that there are regulatory mechanisms, but there's a recognition that if there is an incident, the risk then is high. I don't think the community at large feels that on any daily basis they should be concerned about their particular safety, but they recognize that there is a risk factor, and it's a significant one if something did occur. There's not the confidence that people are handling that, particularly at the most senior levels of management, not so much the fellow or lady who's working in the plant directly.

**Mr Laughren:** I was going to ask you about that because we were in another community that has a nuclear generating station, namely, Bruce. There was a sense that people respected and trusted the local folks who ran the nuclear station but didn't like or trust the people on the 19th floor, as they called it, the head office of Ontario Hydro on University Avenue. What is your sense of that? Do you get along well with the local folks and not so well with the head office too?

**Mr Arthurs:** I wouldn't say it's a matter of not getting along with people; that has never been an issue for us. The local people we deal with who work within the environment they work in are quite positive about it. They feel strongly about what they do and about their ability to manage what they do. But when we have our attention drawn to issues such as the year 2000 problem, which apparently has gone unaddressed by the board of directors when it was presented directly to them, it leads one to question. Those ladies and gentlemen who are working in that organization might be scratching their heads at this point too, going: "Have we addressed it? If so, who addressed it and when? Because it hasn't happened in my terminal this week."

**Mr Laughren:** The reason I'm trying to get at this is that I would categorize your brief as being a very tough one. It's a very strong, tough brief —

**Mr Arthurs:** It's meant to be.

**Mr Laughren:** — about Pickering nuclear. I'm trying to get at what underlies that very serious concern, almost anger, that you have about Pickering. I'm trying to get at what it is that's leading to that. I'm having difficulty.

**Mr Arthurs:** Our experience in the town of Pickering over the past 20-odd years is that our constituents often make reference to our community as a dumping ground. They make reference to it when we see the issues on Hydro as a dumping ground for a nuclear operation, a dumping ground for waste in the Brock West landfill site, with efforts to establish other landfill sites by a number of governments, regional and provincial.

That anger emanates from the dominance of senior levels of governments upon the local community, expropriations of 25 years ago, both provincially and federally, an underlying sense of wanting to have ownership for what goes on in your community and it being denied you on an ongoing basis, and the frustration at this point in time that we are seeking a legitimate process under the Environmental Assessment Act or some type of broad public review so we can get all the stakeholders to the table and share openly to rebuild the confidence, if warranted, and it's being ignored. That's the anger, that's the frustration that exists.

We want to ask the questions that demand answers, but we don't have an adequate forum to do that. You and I as elected representatives singularly and solely will not provide the degree of public confidence. Others have to be at that table whom people can feel connected to. You do your job extremely effectively, but the broad public will not take just your word for it. There are others they want to hear from around the table. They want to feel that it has been shared. Our community is one that has been through airport expropriations, provincial expropriations, multiple landfill issues and the Hydro issues. It's a microcosm, I guess, of issues that would be a concern to any community. We understand and have been involved in those. We want ownership for what goes on in our community and it's being denied.

**Mr Laughren:** I don't want to reopen old demands that were made before this committee was struck, but what would satisfy you more? Would it be an independent inquiry with experts on a panel? Is that what would give you and your community more satisfaction?

**Mr Arthurs:** No, I think what we're asking for at this point is to use the legislation that's in place, to take from that legislation a process that would bring together an environmental assessment process that would look not only at the continuing operation of B and the activity during the shutdown of A, but would do the environmental assessments they're supposed to do, look at alternatives, seek the advice of community and others about alternatives.

Where are we going in energy? I think this is a real opportunity for the government to show substantial leadership in how we deal with issues as significant as energy within our communities, how we engage our community, how we seek answers to where we're going next, share the

responsibilities with community, and if we do that, then we will have the type of buy-in and the outcomes that come from that process. I think the processes are there under the legislation that's currently available.

**Mr O'Toole:** Thank you, Mayor Arthurs, for your presentation. I certainly understand the frustration. You've expressed it very well. Just for the record, I want to clarify that my intention respects and recognizes the points you've made with respect to where these public meetings were held. For the record, I would also state that I think of the two sites in Durham as completely different. The issues surrounding those sites are different and I wanted them to be treated differently, that is, to be given a specific day for each community. That has been my position all along. As a member of this committee, I think there has been a thorough review of the locations. In fact, we're visiting Darlington tomorrow.

This morning at the Pickering plant we heard a litany of cascading events from the AECB, that they more or less chronologized the issues with respect to the deterioration. They kind of categorized it as this: Between the late 1970s and early commissioning of A and B and into the late 1980s they were optimum plants, they were world-class and well-respected operations. Then they went on to cascade that down into a series of both long-term and short-term incidents, many of which have not been addressed today, a great degree of frustration similar to what you've expressed, and it was made clear to us that you and your council entertained the AECB back in June, I gather, pretty much the same report we had.

1500

I want to assure you, though, that the litany of deterioration I think was heard — not in defence. We're not here, and certainly I'm not, to defend Ontario Hydro's action, but I think clearly the current chair, Mr Farlinger, and Mr Andognini, and for that matter Mr Kupcis, all of whom we've met before this committee, took command, took charge of the broader issues and more specific issues as well.

I am wondering if you think that the actions taken by Mr Andognini and his turnaround team, if you will, show the kind of leadership you referred to that was somewhat missing?

**Mr Arthurs:** First, Mr O'Toole, I find it interesting that AECB has suddenly begun expressing the same frustrations constituents are, and they're the guys who are in charge of licensing and ensuring that the plant is well monitored. I find that to be intriguing and very interesting.

Is Mr Andognini in his initiatives showing the type of leadership we're talking about? Yes, I believe he is. He is certainly making the effort to engage the public, but I wonder whether at times it's maybe too little or too late. I wouldn't suggest that he's doing it for this purpose, but the direction might be: "Look, you've got to engage that community out in Pickering. We have to have some defence here, so let's gather them in quickly and say we're doing it." I think his intentions are good. He is obviously a bright gentleman who is knowledgeable in the industry. He's been quite forthright on most issues to this point.

I have to question, though, the issue I raised of the year 2000 problem. He's been there since April. I can only assume as the head of nuclear that he's been party to that process to this point, and to our knowledge it has not been addressed. I don't know whether it's been raised with this committee. I haven't heard that it has.

**Mr O'Toole:** I want to respond to that. For the record, thank you for raising it. It has not been raised before. Picking up on your comment on AECB, I don't speak for any other members of the committee, but certainly there has been some issue — today I express it as, who's got the key here? Is it AECB or the Hydro board? That's really the issue: Who really has the ability to say, "No, no more"?

I'm going to bring it back to the purpose of this committee. Mr Laughren referred to it, and I, representing Durham, appreciate being on the committee. The minister asked me to do that, and Mrs Fisher is from the Bruce area and is on the committee, and we have the parliamentary assistant, Mrs Johns, with the Ministry of the Environment. I think the constitution of this committee, reflected in the members on the other side with their great experience — Mr Conway has been through it, and I mean this respectfully — if you were to check the record, has been thorough. It has been open to all kinds of dynamics and input.

We are looking for one answer, which is to be reassured that the public safety is not at risk. We repeatedly, each member, ask that question. That's first and foremost. Costs are secondary to safety.

I just want to be clear that I think the minister, Mr Sterling, in the constitution of this committee was asked, as Mr Laughren referred, to go more through a public inquiry process, but there are some legitimate legislative responsibilities that I think we're stepping up to. I'm confident that this will be the kind of report that will be a sound, thorough document for the minister to make future directions and commitments in partnership on behalf of the people of Ontario.

You as a mayor, we have to listen to you. We've listened to every mayor. In fact, I'm pleased that you're here today.

My last thing is to really focus right down into the issue. The only mechanism by which you could express your frustration on behalf of your community, as the visible leader for that community, was through the referendum process. I'm going to put to you my final question, and then perhaps Mr Galt would have an opportunity.

Are you a willing host, both short-term and long-term? Are you prepared to work through the dynamics of an aging nuclear facility?

**Mr Arthurs:** Very much prepared to work through all of the dynamics necessary. This is not a host choice at this point. The facility is there, and irrespective of whether it continues to operate, it will be there for many, many years. I see the work you're doing as excellent work and I see it as a jumping-off point for a public process.



I have to say, though, that at the time, maybe in our more casual discussion around our committee room table, when I first proposed a broad public review, Mr Sterling's immediate response off the top of the head was, "Well, if Pickering and Ajax want to pay for it." Before the meeting was over, he was retracting that comment, but let me suggest that his degree of seriousness at that point was indicative of the lack of response I've had in the past number of months to correspondence.

I see this as a good jumping-off point. I know Minister Sterling in his past portfolio was legitimately concerned. I don't dispute that, but certainly the impression left at that meeting with members of our council, and thus the constituency, was rather flippant. This should be a good jumping-off point for a public process that goes far beyond the political process. It should set the stage as to how we deal with issues of energy matters in this province in the future, a strategy to deal with that.

This question in the ballot is not an expression of frustration. The ballot question was a way to gather my community back together, build a consensus on my council so it did not become polarized between the Hydro workers, the value in property, all of those kinds of things that get raised on the one side, and on the other side, shut it down. I spent some considerable time with the community leaders, in an interactive process through a variety of sources, to gather people to the middle and effectively convince members of my council that the approach to take was to request an environmental assessment and go to our constituents with that question, not a question about closing down plants.

They have responded to that because they understand and want a legitimate probe. It's not frustration. This is not a frustration ballot question. This is a public vehicle. This is a vehicle to express to the government of Ontario the support that I believe my community will put behind this question, to say to you that the vast majority of constituents in our municipality feel this is an appropriate mechanism to deal with this issue. I think, if you asked the public across the province of Ontario in the same way, you would get exactly the same kind of response irrespective of what municipality they live in. It's a matter of concern to every citizen in Ontario, not only in the context of nuclear operation but where we are going in energy provision for the next 20 or 30 years. Fossil fuels don't appear to be a desirable alternative. We've heard that coming out of your government immediately upon discussions about bringing the A side down: "Where are we going to get alternative energy sources?" The public needs to be engaged in that in the interests of the long-term energy provisions of this province.

**The Chair:** Your worship, thank you very much for attending upon the committee. We appreciate the evidence you've given today and it will be given serious consideration.

**Mr Arthurs:** Chairman Shea, thank you very much for the opportunity. Members of the committee, I wish you the best in all of your hearings, deputations and your subsequent deliberations and report preparation.

## NUCLEAR AWARENESS PROJECT

**The Chair:** The next deputant is David Martin, research director, Nuclear Awareness Project. Welcome to the committee.

**Mr Dave Martin:** Thank you very much, Chairman Shea. My name is Dave Martin. I'm the research director for Nuclear Awareness Project. We are a public interest group which deals with nuclear issues and promotes alternative energy strategies. We have been intervenors before numerous regulatory bodies. We have about 500 supporters around the province, about 200 of whom reside in Durham region. Durham Nuclear Awareness, or DNA, which addresses nuclear issues specifically within Durham region, is affiliated to Nuclear Awareness Project, as is Energy Action Project. We can be reached by e-mail at [nucaware@web.net](mailto:nucaware@web.net).

I have given the clerk a collection of materials which I ask to be placed as an exhibit before the committee and which I urge you to peruse.

The bottom line of my presentation here today is that the Pickering A and Bruce A nuclear stations should remain shut down permanently once they are shut down, or laid up, as Ontario Hydro would refer to it. In addition, we don't believe that heroic measures should be taken to rehabilitate the Pickering B, Bruce B or Darlington stations, and that implies an early shutdown of those stations.

The immediate problem, however, in our view is the Pickering nuclear station, since Ontario Hydro intends to begin rehabilitation work, according to Mr Andognini, on January 1, 1998. This in our view is extremely ill advised. There are numerous environmental, safety and economic problems at the Pickering stations.

### 1510

Aging is the overall factor here. At 25 years of age and over, Pickering has the oldest power reactors in the country. As with any machine, the older these reactors get, the more they tend to break down. However, with nuclear reactors, unlike a car or some other machine, a mistake can have disastrous consequences.

Some of the other problems at Pickering include:

The absence of a second fast shutdown system at Pickering A.

Inadequate fire protection, including the use of flammable silicone firestops. I would note that the Ontario fire code should be applied to Ontario Hydro nuclear stations just as it's applied to any other building.

Emergency plans are inadequate. I note the absence of a direct alerting system and Ontario Hydro's continued opposition to the expansion of the evacuation zone size and its opposition to the pre-distribution of potassium iodide tablets.

There is inadequate seismic qualification for the Pickering stations. Ontario Hydro does not acknowledge the full range of earthquakes in the Pickering area.

The Pickering site is a high-risk location. There are 1.5 million people within a 30-kilometre radius.

There is an ongoing problem of tritium contamination and other radioactive emissions. Ontario Hydro refuses to

adopt a zero emissions policy, as have other large industrial corporations in this province. In our view, the drinking water guidelines for tritium are not strict enough.

I'm sure that recently you've heard about the significant problems relating to the emissions of over 1,000 tonnes of copper and zinc from Pickering. There were also emissions from Bruce. We know as well that Ontario Hydro has covered up for many years the tritium contamination of groundwater and surface water onsite at Pickering.

We disagree very strongly with Ontario Hydro's assessment that the problem is solely managerial. The problems at Ontario Hydro are fundamentally linked to Candu technology and it is a severely flawed technology. In 1996, Candu had the worst performance of all major reactor types in the world. The average Candu performance around the world was 61.5% capacity factor or load factor. Compare that to 77% for pressurized water reactors, 79% for boiling water reactors, 76% for advanced gas cooled reactors. The Pickering A station, to put it in perspective, had a 36% capacity factor and Pickering B 49% — pathetic. There are numerous generic problems associated with Candu technology.

On the economic side of things I want to note that the IIPA report made absolutely no mention of financial matters. The failure of Ontario Hydro to provide financial information I think speaks volumes, and you've had to drag it out of them. Hydro deigned only to provide at its August 13 announcement a back-of-the-envelope estimate of costs which they pegged at \$5 billion to \$8 billion. We now know that these figures bear very little relation to the reality.

According to the Ernst and Young review, which you've received, costs will total a staggering \$22 billion for the period 1997-2009, and this does not include the \$3-billion cost of replacement power. It doesn't include potentially huge costs such as PVC replacement at Pickering or seismic modifications at Pickering. In fact, it's going to be much higher.

Aside from the colossal cost, there is also the shocking revelation that Hydro has made no contingency plans if their assumptions do not prove to be attainable. They've done no sensitivity analysis and they've not looked at alternatives. Perhaps the most alarming assumption I've seen that they've made is that they can achieve an 86% capacity factor, on average, for their nuclear facilities. If you think they can do that, then you probably think that pigs can fly. If they don't achieve that nuclear performance level, something which they've never been able to do in the past, then the plan is a shambles.

What's the solution? My scepticism, with respect, about the ability of the select committee to solve this problem is a matter of public record. Your time line is very short before you and your resources are relatively limited. I don't think you can get to the bottom of the problems that are facing Ontario Hydro. I think you therefore have to look at some procedural alternatives.

I would also note in that vein that the government's restructuring proposal, the long-awaited white paper for the

electricity sector, is finally being made public tomorrow. Since public presentations to the select committee — at least this is my understanding — end this week, then clearly the public is not being allowed to take the white paper recommendations into account in their submissions to you.

I conclude by saying that you cannot rely upon the Atomic Energy Control Board. The AECB, in our view, has been a lapdog, not a watchdog. They've been asleep at the switch and they've not been willing to get really tough with Ontario Hydro. In any event, the AECB deals only with safety issues in isolation; they're not dealing with economic issues or planning issues such as whether there are viable, cheaper, safer, cleaner alternatives to nuclear power. We conclude that you should recommend an immediate halt to all expenditures for rehabilitation in the nuclear division as well as approvals for expenditures.

As you are now aware after hearing Mayor Arthurs, a referendum is being held on the ballot of the November 10 municipal election in the town of Pickering. The referendum question asks residents whether they support an environmental assessment being held prior to any decision to restart Pickering A and prior to the rehabilitation of Pickering B. The Nuclear Awareness Project supports this assessment because it is an opportunity for all parties to come to the table in a fair and balanced decision-making process. We believe that in the final analysis, with a fair review, the conclusion would be that Pickering A should be permanently shut down and that we should have an early shutdown of Pickering B and other nuclear stations.

I think we owe a debt of gratitude to Mayor Arthurs and the Pickering council for recognizing the magnitude of this problem and for giving the people of Pickering a chance to have their say directly, because they are on the front line.

It's time to take all of these decisions out of the backroom. It's reprehensible that a public entity such as Ontario Hydro should once again be allowed to steamroller over a government and over the public. Ontario Hydro has made phenomenally disastrous decisions in the past, and the fundamental mistake and decision it made was its commitment to nuclear power.

This is by no means a partisan criticism. Governments of all three parties have allowed the construction of the Darlington nuclear station to proceed despite the really insane cost overruns that were taking place and despite the fact that it was not, and is still not, needed. Environmentalists were right when we said that Darlington should be stopped, and I can assure you now that we're right when we say that Ontario Hydro is about to make yet another disastrous mistake.

I think the August announcement has led some people to think there's been a change of heart at Ontario Hydro. This is a wakeup call because nothing has changed at Ontario Hydro. The corporation remains committed to nuclear power. It remains committed to coal generation. It wants to proceed with yet another massive investment in nuclear power to the tune of \$22 billion, and probably much more, with no adequate public review. This is a



megaproject proposal and it's a mega-mistake. Stop it now and submit the whole thing, the whole nuclear asset optimization plan to a public review under the Environmental Assessment Act. We believe you should do it for the health and safety of the people of Ontario and for the economic welfare of the province. Thank you. I'm sorry if I went over a bit.

1520

**The Chair:** No, as a matter of fact, I appreciate that, Mr Martin, and there's actually time for one very, very crisp question per caucus, emphasis on "crisp." We'll begin with Mr Laughren.

**Mr Laughren:** Holy moly.

**The Chair:** I took up your time.

**Mr Laughren:** I'm glad you didn't put it in the form of a question. First of all, when you are answering I hope you will tell me when you learned that the white paper was coming out tomorrow. I agree with you on the short time line for this committee. I'm not happy with that either and I think your comments in that regard are appropriate.

What I'd really want to ask you though is, if as a committee we were to take our job seriously — and I agree with Mr O'Toole's earlier comments that members of the committee will do the best they can given the time frame and the knowledge we have and so forth — we would need to have a package of alternatives if we were to accept what you recommend. It would have to be a package of serious alternatives with the appropriate time lines in them. I notice that's absent from your presentation. I wonder if you could comment on that.

**Mr Martin:** The alternative scenarios are absent from Ontario Hydro's documentation. I think that's the salient observation to make.

**Mr Laughren:** You don't have to.

**Mr Martin:** I would suggest to you they should be and certainly that was the conclusion of Ernst and Young, Ontario Hydro's own auditor in their September 7 study.

**Mr Laughren:** No, I'm not agreeing with what they've done; that's not my point. I think that we as a committee, if we are to come down hard on all the nuclear installations, we have to have an alternative package that we propose to the government or we'll look pretty foolish as a committee.

**Mr Martin:** I think the alternative is a procedural suggestion, because I don't think you have the resources to provide those alternatives; I know I don't. Ontario Hydro, although I think they should have, have not provided you with an adequate range of options. That is why I think the solution is a procedural one; ie, a referral of this entire issue to a process that could give it due diligence, that could provide an adequate review with allowance for public input. I would suggest that process should be under the Ontario Environmental Assessment Act in the form of a full public review.

**Mr Doug Galt (Northumberland):** Thank you for your presentation. It was most interesting. I'd like to just query you a little bit about the AECB and some of your concerns there. Certainly they operate differently in some other countries. Some regulatory bodies, such as in the

US, really point the finger — "There's a problem; fix it" — whereas they seem to look at it and then give a licence. How would you rearrange the AECB? There's been some criticism there. They've given us some confidence that the place isn't going to blow up, that kind of thing. But you're not trusting them. Why are you not trusting them? What should be done to make that organization give you more confidence in the community?

**Mr Martin:** Other nuclear regulatory agencies, such as the Nuclear Regulatory Commission in the US, take a more prescriptive approach to regulation. In other words, they get involved at a more hands-on level than the AECB does, which basically delegates responsibility to the operator, to Ontario Hydro. That just isn't working and I think the evidence is there in just how bad things have gotten, particularly at Pickering.

**Mr Galt:** You're recommending more the American style, where they're more prescriptive. They're there all the time. I don't know what they're doing from day to day when they're not being prescriptive like that, but you would recommend that style?

**Mr Martin:** I think that is going to part of the solution. I think it's also a matter of political will at the time. I think some serious questions need to be asked about the AECB and I certainly hope the federal government is doing that.

**Mr Monte Kwinter (Wilson Heights):** Mr Martin, I just wanted to get your explanation of the \$22-billion figure, the breakdown. I know the figure that appears in the Ernst and Young report, but that's an accumulative one over a number of years and not all of it is really attributable to the recovery plan. If you could just expand on that.

**Mr Martin:** Yes. I refer you to the table on page 20, schedule 2, of the Ontario Hydro nuclear asset optimization plan assessment of financial estimates, September 7, by Ernst and Young. That's where the \$22-billion figure is located. It includes costs from 1997 through to 2009, it includes maintenance and it includes what Hydro refers to as capital expenditures. It does have various other allowances. That's very clearly the bottom line here for the nuclear asset optimization plan. I haven't been able to review the substance of the presentation from Ontario Hydro on the financial aspects. Maybe they gave you more detail. This is the most detail I have seen.

**Mr Kwinter:** What I'm saying, though, is that \$21.672-billion figure that's in there, that is one number, but what I have a problem with is, you're trying to equate the \$5-billion to \$8-billion recovery plan, to say that really isn't the number, the number is \$22 billion. I am suggesting to you that the overall operation of the nuclear division from now to the year 2009 — and that's maintenance, capital and all of those things — will be \$21 billion. But that is not an incremental cost. The recovery plan is an incremental cost of about \$8 billion, more or less. Andognini admitted that they're still plumbing the depths of the problem and we don't know the final costs.

I just wanted to clarify and make sure. I wanted to get it from you where that \$22 billion — if that's the \$22 billion

you're referring to, that is for ongoing operations that would be incurred with or without the recovery plan, not all of it, because some of it contains that \$8 billion.

**Mr Martin:** The reason I think it's valid to use the \$22 billion is that you've, I'm sure, heard this plan referred to as the 12-16-20 plan. Of course, that implies that the A stations will be brought back, that they will be restarted; that's the fundamental basis of this plan. I would suggest to you that it also involves a life extension for the B reactors in Darlington as well. So to suggest that \$22 billion really isn't the incremental costs, that that's what we would have paid otherwise, I don't think that's so. I think this represents the basis of, in effect, rebuilding the nuclear fleet in Ontario.

**The Chair:** Thank you very much, Mr Martin. We appreciate the evidence you've given today and you're excused.

#### SALLY McLEOD

**The Chair:** I call upon Sally McLeod for a 10-minute presentation. Welcome to the select committee. You have 10 minutes to use as you choose.

**Mrs Sally McLeod:** Thank you, Mr Chairman. My name is Sally McLeod. I am a resident of Pickering, Ontario. As a resident of Pickering for the past 10 years, I am the citizen who, without agenda, organized the first ever community public hearing on the Pickering nuclear plant.

I hadn't planned on doing this. In fact, I had very few concerns about the plant, our nuclear neighbour, until of course this past summer, and really what a terrifying summer it has been as a citizen: Hydro's admissions of negligent operational procedures; Hydro's admissions of major mechanical breakdowns; heavy water spills; the illegal dumping of 40,000 barrels of some substance on their property; the continuing copper and lead contamination of Lake Ontario; the failing report card, the IIPA; tritium in the lake, a lake shared by the GTA and our American neighbours; tritium in our drinking water; flammable gas leaks, September 6, to be exact. These are not human errors, they are mechanical. I think that's the most important thing to look at: they are mechanical.

1530

What are we to think as citizens when we hear these things? It seemed every week this past summer we'd open up the paper and there would be another incident that happened at that plant — always mechanical. Sirens going off, with differing explanations to the community. I lived this one, and you know what? At this moment I'm very happy I did because that's why I got involved. It made me, in a sense, come to arms with this whole debate about nuclear and who is in our community.

I was down on Kinsmen field. This is a soccer field that sits directly beside the plant, where no houses can be erected but where Pickering children must play if they want to participate in community sports. It was a beautiful September Saturday morning, 600 families out in the fields, the sun shining, lovely day, and out of nowhere this air raid siren went off, right next door beside these playing

fields. It was very loud, very shocking to hear, and then the next thing we knew, this loudspeaker went off and someone was telling all of the employees some message which we could not hear. We all looked at each other and wondered, what do we do? Do you actually get in your car and drive away? Do you just stay calm and try not to tell your children that something's up? They are out there playing. They're not sure what to do. Do we stop our game? They're looking at you for an answer.

This siren is carrying on, and at that moment that's what galvanized this movement in the community. Several of us who had never met each other before looked at each other and we swapped phone numbers and said: "This is it. We have to find out what's going on." We waited. Nobody came from Hydro down to this park, where they know the community is there probably five times a week playing, 600 families, always. We waited for an explanation. Nothing happened. That week we made three phone calls and we got three different answers.

There was also no press coverage for this gas problem, this gas rupture — that's what it turned out to be. What we found is there is a state of continual mechanical problems; that is the fact. It is also a state of deception, perhaps collusion, when leaks have been going on for 18 years and the public is not made aware. When we made three phone calls attempting to find out what the sirens were for, three different answers came forward. We were first told it was a change of shift. We were then told it was a fire drill. Finally, when we threatened that we were going to the press — and these are three different people who called — we were told, finally, that it was a gas leak. We got three different answers. Earlier a question was raised, you wonder why the community is feeling this way: It's because of these situations. We are never told the truth. We have to keep digging for the truth. At that moment, when we got these three different answers, that's when I said, "That is enough."

I will not sit at the back of Hydro's bus any more. That's where they have put this community, at the back of the bus. That's when I decided to organize the public meeting where the community could come together. We would not wait for Hydro to invite us to tell us what was going on. We were going to take it upon ourselves to find out some answers, so we gathered together in September.

What has happened since our public meeting? Well, we've heard revelations of negligent fire protection exposed by the CBC — not by Hydro. They had those reports; they've probably had them for months. They chose not to come forward to tell us they were going to employ is it 80 firemen? It took the CBC to go and get that. They did not come forward with goodwill to tell the community.

This community, the entire GTA and our government have been treated with such arrogance: that only nuclear people understand nuclear; that they are superior to us; that they are all good people, and they all go to church, so how can they possibly be involved in something harmful? That there are no alternatives but dark and cold; that the Ontario taxpayer will always foot the bill; that they are not accountable to anyone at any level; that their mission



statement is not to provide electricity but only nuclear electricity. That was then and this is now.

I am not here to debate nuclear power. I am here to challenge an old, mechanically unsafe money pit of a nuclear plant, and I stand not alone. The Pickering councillors, under the courageous leadership of Mayor Arthurs, have placed a nuclear referendum question on the November 10 election ballot. They chose not to go with my question: "Do you want the Pickering nuclear plant closed? Yes or no." I would prefer this question; however, I am happy to support the compromise of an environmental assessment question. All of us in the GTA have the democratic right to know if the Pickering nuclear plant is safe environmentally. We must know before any more money is spent on extending the life of this old plant. These are machines. We can't forget that. That is what they are. They have a finite lifespan: some say 25 years, which is where we are right now; some say perhaps 40. They are not immortal, they are not divine. They will be decommissioned some day, no matter what, so let's make "some day" today.

The people need a voice. We have a wonderful window of opportunity at this point. The licence expires in March 1998 and we can make a change. The people, as I said, need a voice. They will answer the referendum question, but the real question is, will we be heard? Will the community of Pickering be heard? If we all vote yes on this referendum question, that we do want this environmental assessment done, will it actually be done? That's where you people come in.

I'm asking this committee for your leadership, to join us, to lead us. I'm asking that you demand a full environmental assessment of the Pickering nuclear plant today, a completely unbiased public review with intervenor funding. You people initiate this, this committee. Our community wants the same and we do it in tandem. The three million people who are affected by this nuclear plant demand their due diligence. It is our democratic right. We must have the courage to ask the questions to seek the truth.

**The Chair:** Thank you, Mrs McLeod. That brings you right on the button of your time, and I appreciate your evidence. Thank you very kindly for being with the select committee.

**Mr Laughren:** On a point of order, Mr Chair: I'd appreciate very much a copy of that presentation. Perhaps some time you could tidy it up and mail it in to the committee.

**Mrs McLeod:** Sure, my pleasure.

**The Chair:** That's not a point of order. It is a decent request and I'm sure Hansard will be happy to make sure you get a copy as well, Mr Laughren.

JOE PACIONE

**The Chair:** Joe Pacione, please come forward and take the witness stand. You have 10 minutes for your presentation and questions and answers.

**Mr Joe Pacione:** Thank you very much, Mr Chairman. My name is Joe Pacione. I am a resident of Pickering. I'm coming to you today as a concerned citizen. My story picks up from where Sally left off, in a sense. Presently I am seeking a position as ward 1 local councillor. In August I was out canvassing and I started to hear the concerns of a lot of the citizens, and sure enough, one of the top concerns was the nuclear power plant. As time progressed, it became one of the top three issues that were out there.

My wife and I have lived in Pickering since 1991 and the nuclear power plant was never a big issue or concern when we moved there six years ago. The leaks and the different reports we read in the paper were of concern, but at the same time it was always in the back of my mind. I always presumed that things were being taken care of there. That was always the perception I had. As time went on, in the last three months I've met about 4,000 people at the door, and this is just ward 1.

So I have a different perspective. I'm hearing different things, and what I'm hearing is very, very distressful. The nuclear power plant seemed to be the one issue that constantly came up — constantly. I heard stories that I just couldn't believe, all kinds of stories, and that's one of the reasons I came today, because I wanted to at least relay to you that there is a deep, profound belief that the life expectancy of this plant has seen its time come.

Many of the people whom I've met at the lower end of ward 1 are long-time residents who have been there 35 years, 40 years, 27 years, and they remember the area before the nuclear power plant even came there.

1540

Just a simple story: One woman I met was a 30-year resident and she remembers when there was no nuclear power plant. Within three years, the newspaper articles started to come out that a nuclear power plant was going to be built. She was excited at that prospect and she started collecting all the newspaper clippings; she and her husband did that as a hobby. Her favourite pastime was to take her dogs just down the street, in full view of the power plant, and the dogs used to swim in the lake etc.

She said to me that about 10 years ago she started really to think more and more about the safety aspect of this nuclear power plant. I asked her why. She said, "Over the course of 25 years, I had three different dogs and each dog died within five years of the same problem." So I said, "What's that got to do with the nuclear power plant?" "Well, the dogs all swam in the park just down the street, they all jumped into the water and they all died of cancerous lymphoma of the throat," or some area in here. She said, "It's my belief that there's something wrong with the water." This is just one woman saying this. She has a deep, profound concern from these newspaper reports that they are probably leaking more, from her perspective.

There are all kinds of other stories. Another story I heard was that a woman said that she lived near Frenchman's Bay Yacht Club and she kept reports. She remembers newspaper articles. When the plant was first built,

the articles were saying that the plant only had a life expectancy of 25 years. She remembers those things. She told me that just a week ago. She said to me: "That 25-year period of time is now. That plant is probably worn out. Why rebuild it? We've been hosting this plant for 25 years. We don't need to have it rebuilt."

These are just two simple little stories and they were just constantly telling me these stories. These are from long-time residents; these are not necessarily from people who have just moved there. All these people who have just moved there recently, who have come into this area, have said to me consistently that that is the number one issue with them.

My belief is that the public perception out there is that this plant is mismanaged, it's mechanical, there are breakdowns constantly. No matter how much you spend, it's not going to make a difference in the perception out there.

I believe this government, yourselves, should put forward an idea out there of decommissioning this plant once and for all. It will probably take a long period of time, but I think that's what the government should be doing. I think the perception out there is that this plant is not safe, that no more money should be spent on it. I believe in the ability of government to do positive things and I believe shutting down this plant would be perceived by Ontarians as a positive thing.

There are many other alternatives. I think spending any more money on this nuclear power facility would be just redundant. I don't think it's necessary. I think the constituents, at least where I've talked to them in ward 1, feel the same way.

An environmental assessment is essential, and even after the assessment is done, it will probably conclude that this plant has seen its time come. That's all I have to say.

**The Chair:** There is time, and I emphasize the word "crisp" this time. That will include the answers too, please. Very quickly, one question from each. We'll begin with the government caucus.

**Mrs Barbara Fisher (Bruce):** I happen to be the member who represents the riding of Bruce. As you know, we have eight units there as well. I'd be interested in having your opinion. I think both of the communities, the Pickering-Darlington community — maybe I agree with Mr O'Toole that they shouldn't be joined as one, because I do understand there's a different atmosphere, if you will, with regard to the site.

Let's take Pickering A and Bruce A. The presentations we're hearing this afternoon are absolute opposites in terms of attitude and atmosphere and acceptance within the community. I just wonder why that might be if the backyard is as educated in each of the communities, which I believe it is. Why do you think that is?

**Mr Pacione:** I think because of a lot of these reports that have been coming out recently. I think the public, like myself, have always presumed that it was a safe facility, but when you start hearing things and seeing reports on television, that they had 33 fires there last year, that they don't have adequate fire facilities there, that they don't have a sprinkler system — even the school has a sprinkler

system. If this plant hasn't got a sprinkler system or adequate fire protection, why would I feel safe? How could they have built this thing? I think the perception out there with the public is that it just wasn't built properly at that time. They should have taken these things into consideration and management should have been handling this thing much more properly out there. The perception right now I think has totally eroded. I'll tell you right now, this assessment question, once it comes up in a referendum, should be overwhelming: 95%.

**Mr Kwinter:** Mr Pacione, we really do have a difference of opinion in that, in our hearings to date, if there is one single strand that has gone through them from all of the experts — and you may question the experts — it is that safety is not a problem. Whether it's the AECB, whether it's Andognini, whether it's any of the people, foreign experts, they all say the same thing, that the Candu technology is "robust" — their word — and that safety is not a problem. I just want to get your response as to whether or not you think there's a communication problem.

I've read the incident reports from the emergency measures office in Durham and I can tell you that one of your other neighbours is General Motors. Although when you talk nuclear, every time there is any kind of an incident, you suddenly say, "Oh, my God, we're fried," but if you saw the results that came out of General Motors, with the accidents and the breakdowns, I would say to you that they are probably — and I don't know this for sure — at least equal to what's happening in a major facility like Pickering.

You keep talking about perception. Do you think it really is a problem of communication maybe, a failure to communicate what is happening, and as a result it leads to these people imagining the worst?

**Mr Pacione:** I don't think it's imagining. Things are happening there. We're not imagining all of these incidents that have occurred in the last six months, the last two years. We're not imagining the fact that they don't have adequate fire protection there. Am I imagining that? I don't think so. That's a fact. I don't think you can dismiss that.

We can communicate now and say, "Yes, we've just put in an 80-man firefighting force in there, 24 hours a day." People are saying to me now: "Why did it take you so long to do that? Didn't we need it for the last 25 years?" People are not that stupid. People are saying that. No matter what we do now, I don't think you're going to get that confidence back, I really don't.

**Mr Laughren:** You're running in ward 1?

**Mr Pacione:** Ward 1, yes. That's the western sector of Pickering.

**Mr Laughren:** I suspected as much. I wanted to know if you find quite a dramatic difference when you knock on the door of a worker at one of the plants.

**Mr Pacione:** Actually, that's a very good question you ask. I have run into those and the perception there is that they believe the plant is safe. They all say the same thing: "I wouldn't work there if it wasn't safe." On the other



hand, you ask the housewives and they have a different idea. They will say honestly: "Yes, I'm worried about my husband's job, but I am distressed about these things that I'm reading in the paper. I am worried." So there is that possibility.

Every worker that I've talked to says it's safe. I haven't met anybody who's said it's not safe. They all say the same thing: "If I didn't believe it was safe, I wouldn't go in." "But do you hear all these other things?"

There was a report one day — I can't substantiate this; I heard this from someone — that a bunch of housewives of Hydro workers quickly went to the local high schools and elementary schools and took their kids out, out of the blue. There was this rumour. I don't know if that was true or not, maybe because something happened, I don't know. But these things filter around and they stay there. They linger. Rebuilding that is going to take a long time and I don't think it's going to be done. My feeling is that this nuclear facility will eventually be decommissioned. That's my feeling.

**The Chair:** Thank you, Mr Pacione. I appreciate your presence before the select committee. If we have any further need of your evidence, we'll certainly be in touch with you. I will have a long discussion with members later about the definition of the word "crisp." We may have to redefine that just a bit. No, you weren't bad, Mr Laughren.

1550

#### SUZANNE ELSTON

**The Chair:** The next presenter is Suzanne Elston. Welcome to the select committee. You have 10 minutes for questions and answers.

**Ms Suzanne Elston:** Thank you for the opportunity to speak to you today. My name is Suzanne Elston. Like many of the presenters that have spoken today, I bring a variety of perspectives to this process. I am about to enter my second term as a public utilities commissioner for the municipality of Clarington. In this capacity, I serve on the Municipal Electric Association's environmental matters committee. I am a founding member of Durham Nuclear Awareness. My weekly environmental column is now in its ninth year of syndication around the province, and my radio commentary can be heard regularly on 110 national public radio stations in the Great Lakes basin. But that's not why I'm here.

I'm here because I'm a parent who lives within 10 kilometres of the Darlington nuclear generating station. I'm here because I'm concerned about the health of my three kids and the health, both economic and environmental, of this province.

The last two weeks have been very difficult. I've been juggling a very busy schedule with the lives of my three children who, thanks to education cuts, are no longer in school. It troubles me deeply that \$1 billion in education cuts have paralysed our school system, while Ontario Hydro is allowed to commit \$5 billion to \$8 billion of our resources to its nuclear recovery program with little or no

public consultation. There is something seriously wrong with this picture.

You may argue that the two are not related. I beg to differ. While one deals with ratepayers' funds and the other with taxpayers' revenues, the ultimate control is the same: the government of the province of Ontario. So why is it that this government is willing to paralyse the education system for \$1 billion, but is unwilling to confront Ontario Hydro for almost 10 times that amount? I believe it is fear: fear of change, fear of Ontario Hydro, fear of the sheer force required to dismantle the largest utility in North America and fear of the financial consequences for this province. The time for fear is over; it's time for action.

It troubles me that it has taken 10 years of hard work to have the appropriate officials begin to come to the same conclusions that environmental activists made long ago: Nuclear power is unsustainable; our nuclear plants are in serious disrepair; the cost to maintain these plants renders them unviable. It troubles me that two years after it was released, the Macdonald committee report has all but been ignored. This is despite the fact that its recommendations are in essence supported by the MEA, the Municipal Electric Association, the environmental community, the Independent Power Producers' Society of Ontario and the individual utilities themselves.

It troubles me that, despite sweeping changes in the electricity sector in North America, Ontario Hydro's monopoly continues to control the energy future of this province. It troubles me that for too long we've been told to trust Ontario Hydro. It troubles me that over a year ago, Norm Sterling stood before the district 1 annual meeting of the MEA and promised that the release of the white paper was imminent. I now understand that the white paper will be released tomorrow. I find it troubling that, given the implications this document will have for the electricity sector, it was not made available for your deliberations or for the people that came to speak to you.

We need the recommendations of the Macdonald committee implemented now. We need to make Ontario Hydro accountable now. We need strong, sustainable energy plans that will allow this province to lead this country into the millennium now. We need a commitment from this government that both the Pickering A and the Bruce A stations will be shut down permanently. We can no longer throw good money after bad. What we need is action, and we need it now. Thank you for your time.

**The Chair:** Thank you very much, Suzanne. We have, I dare say, time for one crisp question from each caucus. We'll try again, shall we? We'll begin with Mr Conway.

**Mr Conway:** Thank you, Ms Elston, for a very spirited and direct presentation. One of the questions that the paper on electricity reform is clearly going to give quite a lot of discussion to is the whole question of stranded assets, stranded debts at Ontario Hydro. You're a municipal politician. The Macdonald commission, quite frankly, speaks of a very substantial dismemberment of Ontario Hydro.

There is \$29 billion, \$30 billion worth of publicly guaranteed debt at Ontario Hydro. Let us say that we simply took Ontario Hydro apart. What do you think the people of Clarington would want us to recommend about the management of Hydro debt?

**Ms Elston:** First of all, let me make it clear to you that I'm not speaking on behalf of Clarington Hydro, but I think the answer is very clear. In most of the reports, there is a consensus regarding the dismantling of Ontario Hydro, that transmission and generation be broken up. What I think the most equitable way of avoiding stranded assets would be is if a transmission charge was put on a transco, that a publicly owned monopoly in the transmission sector be maintained and that everyone who accesses that transmission corridor be required to pay a fee, a debt fee, whatever you want to call it. This would also make provisions for independent power producers to help pay down the debt, international power producers coming in from the US, whatever. It is the most equitable and reasonable way. I share your concern about the stranded assets and we cannot allow that debt to go uncared for.

**Mr Laughren:** I'm going to pick up on that, because I understand what you're saying and that it could have some appeal, but the problem, it seems to me and I'd appreciate your comment, is that you can have very large institutional users of electricity, Falconbridge, Inco in my own community, General Motors, wherever, that would generate their own power and not access the transmission lines whatsoever, and would resist mightily any charge against the debt, the debt charges, being applied to them. I wonder if you've got your mind — I haven't got mine, so believe me, I'm not critical if you haven't — around that problem.

**Ms Elston:** I must admit truthfully that cogen for large manufacturers isn't a consideration I've looked at. Fortunately, it's not up to me to come up with that solution.

**Mr Laughren:** I understand that.

**Ms Elston:** I understand, but it's not something I have considered.

**Mr O'Toole:** Thank you very much, Suzanne. I do read your column and try to keep abreast of your point of view. Thank you for your politically driven comments; I accept them as that. Would you be in favour of closing the Darlington nuclear plant?

**Ms Elston:** Would I be in favour? Immediately? No, but I believe what we have recognized — and all of the evidence is there — is that the days of advancing nuclear technology are over. I think that in good time the Darlington nuclear generating station should be phased out. I think the example we've learned from Pickering is that heroic measures do not work, nor should they work, and that the projected life of the plant should be simply that. You know, we talked about 25 years, whatever. I don't think we should be investing any more money. I think the question will answer itself, John, when the Darlington plant comes into the same age where the Pickering plant is now. Hopefully, we will have come to a more mature attitude towards energy and we will have solutions apparent to us, we will get through this crisis, and by the time it comes time to look at the life of the Darlington plant we

will say: "No. There is no point. This is what it was built for and now let's move on to more sustainable and brighter energy futures."

**Mr Laughren:** On a point of order, Mr Chairmen: Are you going to allow those politically driven questions?

**The Chair:** That's out of order, Mr Laughren, and I'm pleased to rule that way. I suspect that Ms Elston can care for herself in a very competent fashion.

**Ms Elston:** I was going to say, you don't have to worry about me, Mr Laughren.

**The Chair:** Thank you. I don't need any other incitement here. There's plenty to go around. Thank you, Ms Elston.

**Ms Elston:** I thank you all for your time.

1600

KAREN PAUL

**The Chair:** I call upon Karen Paul. Welcome to the select committee. We appreciate you being here. You have 10 minutes for your presentation, including questions and answers.

**Mrs Karen Paul:** My name is Karen Paul. I'm a resident of Pickering, Ontario. I first want to say I've been following quite closely the transcripts of this committee's proceedings and I'm very proud of the work that has been done, the questions that have been asked by all members to the people who have come before you. I am speaking today as a very new resident of Pickering. I have been chastised for that when I've spoken out, as being new to Pickering, but I am also a resident of Ontario, so I think my opinion is valid.

I moved to Pickering just under two years ago with my very young family, and I must say I was one of those people who was in a complete state of denial that anything could possibly be wrong. When I moved from Kingston some people said, "Pickering?" I said: "Oh, there's no problem. It's Toronto. Oh yes, the nuclear plant, right. It should be fine. Everything's fine. The government is taking care of it." Things haven't quite gone the way I'd hoped.

As a matter of fact, I was one of those parents who went to pick their kids up one day and found that there had been a rumour of people taking their children out of school. I had no idea that such a thing could happen. I was quite surprised at the time. But I went back into my nice little state of denial and I got through the next several months, until we started hearing about the problems that were happening at the plant.

The other day a candidate came to my door with a Pickering Hydro hat on and we had quite a discussion about the state of Ontario Hydro. We were talking about the recovery plan. He said, "You know, we are kind of guinea pigs," and he stopped and he tried to take it back. I said to him that I understood he really meant to say it, because this is an experiment, this nuclear experiment that we're into. We are at the point in time where our plants are coming of age. The aging is inescapable and it's



something that I've since learned was not really well planned for.

The reactors in Pickering are breaking down earlier than was expected. I think we have to come clean about this and we have to look at who said 40 and who said 20 and can we settle on 30 years? But it's kind of like an old car. The older it gets, the less efficient it gets, the less dependable and the less safe, ultimately.

This plant is in the most densely populated part of this country so a serious accident is really unimaginable, and we'll all go back into that state of denial again because we don't want to go there. I think someone at this committee said that knowing what they know, they'd never have put up a nuclear plant or a series of reactors this size in an area like Pickering. It was not a good idea. I think over time we will address that as we phase out nuclear.

The way I see it, Ontario Hydro bet the farm on nuclear at the expense of everything else, and it continues to do so. They want to salvage these aging, accident-prone reactors and then they want to rev them up to full speed, want to rev them up to 80% capacity to pay for it. That's a gamble I'm not really interested in taking, personally.

Ontario Hydro has known for a long time that the Pickering plant was in trouble. The AECB came here and said that they were within a hair's width of shutting Pickering down last year. Ontario Hydro has presented the AECB with plan after plan after plan to improve efficiency and safety and it's been stated very clearly that they were great at making promises and really bad at carrying them through.

With something as technical as nuclear power, I don't understand why we have to have such blind faith in it. I know we're in a church but —

**Mr Conway:** The Chairman of this committee is a noted Anglican divine.

**Mrs Paul:** I apologize.

**The Chair:** The church is aware of burning.

**Mrs Paul:** I think we're trying to push the technology beyond where it obviously can go and needs to go, and at the end of the day we are still stuck with the problem of waste. We still talk in terms of temporary waste disposal — storage really. Our Pickering site is a waste site for radioactive material. It's stockpiling up on our waterfront and that's an unfortunate problem that has yet to be resolved after many years of attempts.

We can't escape the fact that we'll have to decommission these plants eventually. As has been stated very clearly, these plants have a finite lifespan. Trying to push that is a very foolhardy, dangerous thing to do, primarily I guess because of the location in my backyard, but it is also in the heart of the province and in the heart of the country. As I said before, we simply can't risk a serious accident at this plant. That's just a given.

We need to step back from nuclear, mature and look at it as the world is looking at nuclear. There's no room for error in this recovery plan, in more ways than one, and the truth is just starting to come out about the total cost of all of this. It would be wrong of us to repeat old mistakes. I frankly don't want to be a guinea pig and I don't want to

feel like I'm part of this experiment. That's why I think a lot of us have come out from that sleepy bedroom mentality we had and have decided to speak out.

At 25 years the Pickering A reactors are likely at the time when they should be permanently shut down. The phase-out of nuclear is coming from many different angles. We're just one part of that big picture.

I again support a full environmental assessment of the safety, economic and environmental issues and I really applaud Mayor Arthurs for taking a very sensitive issue and handling it extremely well.

Ms Johns, you asked me a question, would the public pay more for energy? I think the full cost of nuclear has not been presented to the public. I think we're going to pay more. The signs are out that this is going to cost us. We can't escape it. I think that presented properly, we all understand our responsibility to this attempt we made at making nuclear solve all of our energy problems.

It's time. I'm ready and I want to see my children — as a matter of fact, I've told my nine-year-old that he probably won't get his electricity from nuclear power. I'm hoping that I'll be right and I'm hoping that money will be spent to fully develop and implement those safe, sustainable forms of energy and we can put an end to the nuclear experiment.

**The Chair:** Thank you very much for deputing. That just about uses the time, but I appreciate it. May I also say on behalf of the committee how pleasant it is to have a generous comment, as you began, about the work of the committee. Thank you very much. I appreciate that.

## CANADIAN NUCLEAR WORKERS' COUNCIL

**The Chair:** I ask David Shier, president of the Canadian Nuclear Workers' Council, to come forward to the witness table, please. You have 20 minutes for your presentation, including questions and answers.

**Mr David Shier:** Good afternoon and thank you very much for providing the opportunity for me to address the panel. My name is David Shier. I'm president of the Canadian Nuclear Workers' Council. I've provided copies of my presentation, and I guess the good news is I'm not going to read it verbatim. I'm going to skim through it and I will make some additional ad hoc comments.

The first part of the brief summarizes what our organization is. To simplify it, the council is an umbrella organization of mainly unions that are involved in the nuclear industry in Canada. We perform the function of giving those unions and those workers a vehicle to join the nuclear debate and present the issues of nuclear energy, nuclear medicine, the whole nuclear industry from a worker perspective. We are also connected to the international scene. We were a founding member and we're still a member of the World Council of Nuclear Workers. My comments today will be from that perspective, from the workers in the industry and with some of the comments of the workers' views worldwide.

First of all, the safety aspect is something that workers naturally would like to comment on. Regardless of particular mechanical or equipment breakdowns at the Pickering nuclear plant, the single overriding concern of all parties is, is it safe? Members of the committee and residents of the nuclear community can be assured that all Ontario Hydro reactors are indeed safe from the worker perspective.

I know you've been going on around that and hearing lots about it. All the different groups have assured us that it is safe. I think it should be added to this fact that the workers in these facilities do maintain that they are safe, and also the workers in the industry in general. Here we're talking about the nuclear stations, but not too far away from here we do have other nuclear facilities. We have fuel fabrication plants in Port Hope and also in Peterborough, and lots of these people work outside the location here but do live in this community.

**1610**

Also on the safety concern, in my capacity as the nuclear workers' council president, I was in France back in September dealing with some meetings with the world nuclear worker council and it was made quite clear to me by other members of the organization that their big question was: "What's going on in Canada? We thought your reactors were safe." This is something we have to get out internationally, to make sure they are still perceived as safe as they were before.

From the workers' comparison again, we look at that simple analogy of comparing nuclear plants to a car: When a car gets a few years old you don't throw it away, you repair it. This fits into the whole concern of the environmentalists as well. You don't trash things, you try to repair them and keep them going.

To reiterate a point that we have made many times before, if there were any substantial threats to the human or natural environment from Ontario Hydro's nuclear reactors, members of this committee or of the nuclear community would not have to wait to read about it in the media. As a spokesperson for the thousands of workers who spend most days of their lives working not only in the offices of nuclear plants and uranium mining and processing but also in reactor vaults and spent fuel bays, I can assure everyone that you'd hear it from the workers first.

I qualify that by saying that the Canadian nuclear industry is a very highly unionized sector and many of the main unions put health and safety very high on their agenda. They've got a record of addressing and making public any safety concerns. The unions involved in this organization are the Steelworkers; the Communication, Energy and Paperworkers; the Power Workers' Union, CUPE workers; several other ones as well. They all have a good record of bringing out any health and safety issues. That would not exclude the nuclear facilities either.

To assume that a nuclear worker would deliberately hide or ignore anything that compromised their personal safety or that of their families in the community for the sake of hanging on to a paycheque is to entertain a radi-

cally new view of human nature; and that would not happen, in our view.

Looking at the replacement component of the proposal, we get a clearer picture of the role and value of nuclear power in Ontario when we consider the cost of the replacement fossil fuel energy for only seven reactors during the proposed refurbishment period, which is estimated at around \$3 billion. This does not include the environmental costs of the increased production of acid gas. This is a definite concern for workers.

I've just returned from Manitoba where the Canadian Labour Congress was holding a health, safety and environment conference this weekend. A lot of the true environmentalists in the country are asking the question, "What's going on here if we're going to replace safe nuclear plants with more fossil generation?" We all are aware of the present state of the greenhouse gas situation in Canada, where we're already exceeding our limits. If this proposal goes through it will actually increase them again. There is a meeting, which I'm sure you're aware of, coming up in a few weeks in Japan where the countries of the world are getting together to try and make another commitment to the greenhouse gas effect. I'd suggest that this now does have some international implications by this proposal.

The other sections here I will scoot through, as I indicated I was not going to read verbatim. But I would also like to comment on the staffing. The matter of staffing shortage has also been advanced as a reason for shutting down the seven nuclear reactors, the reason being that there simply are not enough skilled tradespeople to carry out the huge maintenance backlog that's required. We would question this logic. We believe it is possible to repair the nuclear units while keeping them in operation. With enough additional staff, the backlog can be cleared during a reactor's scheduled maintenance outages.

It's true that there are not enough skilled people in Ontario Hydro's present staff complement to carry out this work while the reactors are in operation, but there are many unemployed skilled trades across the country, those recently laid off and in planned future layoffs by Hydro and also by AECL, who with minimal additional training could carry out the required maintenance during a reactor's scheduled outage.

I'll give you some examples of that. In Quebec and New Brunswick there are nuclear plants. They are smaller than the plants in Ontario and they don't have the same staff we have. When they have outages there, they go to the community and hire skilled tradespeople to come in and assist with their outages. There are people in the community who can come in and do this work to get these units up on improved performance in a short period of time.

The assertion that we must shut down seven reactors for several years, take on billions of dollars of replacement energy costs and degrade the environment, all because there are not enough skilled people on hand, is, at the very least, highly questionable.



In conclusion, the Nuclear Workers' Council would ask the members of the committee to consider the following:

Regarding the safety of the plants, the responsible authorities both in Canada and internationally have endorsed the reactors in question as being safe, and the people who work in them are telling you they are safe. Reduced effectiveness and diminished performance do not mean unsafe. We trust these views will persuade you on the condition of the reactors. I emphasize that I think we have to do a lot of work in that area to repair the damage that's been done to our Candu system in the minds of people across the world.

As to reparability, our view is that in bringing these reactors back into service, there simply are no reasonable alternatives to produce this amount of base load electricity in Ontario within any reasonable time frame for the costs envisaged.

Also, refurbished nuclear reactors will be a significant bounty for Ontario on two major counts: first from the employment standpoint — and we trust that the committee will agree that Ontario's unemployment levels are in no need of further expansion — and second, refurbished reactors will be extremely important to Ontario Hydro as tremendous revenue earners and especially if we see the competitive market that is expected within a few years.

Regarding the recommendation that the reactors must be shut down while being repaired, we strongly argue that there are significantly less expensive alternatives to shutting them down, both from an employment standpoint and in terms of costs to energy consumers. We would strongly urge the committee to consider these alternatives.

I would also like to add that I understand there was a presentation by the British Energy group to one of your hearings. I had the opportunity a few years back to tour one of the generating stations they were talking about, how they improved their efficiency and were improving safety and so on. In my view, the plant I was in looked very clean, looked very well. One of the big things that came across was that the workers had played a very major role in turning that station around. There was a lot of union-management cooperation. The union was involved with input on how to do things better.

If you look at the charts that they provided, you'll see that was through the years 1992, 1993, 1994 and 1995. I was there in 1995. Actually, we had the manager from that station with a couple of his workers over to Canada two years ago this month and we did tour them around the Pickering and the Darlington stations where we had some dialogue with the management and the union people. There are ways of doing this. I guess my point here is that workers should be involved with their ideas as well on how these plants can be brought up and ways of doing it quickly and safely.

Again, thank you for giving me the opportunity to make my presentation.

**The Chair:** Thank you, Mr Shier. We appreciate your evidence. We have a minute and a half for each caucus. We will begin the questioning with Mr Laughren.

**Mr Laughren:** I would like to challenge you on your comment about workers in uranium mines, but I'll leave that for another day.

You make a statement here, "The technology has not declined — machines do not run by themselves...." How can you say that the technology has not declined when the older the plants get the more breakdowns they have, the more problems they have, the more difficult and expensive they are to resolve, it seems? What do you mean that the technology has not declined? I'm at a loss.

**Mr Shier:** Our reference there is that it's a safe technology. As these machines get older you have a choice: You can scrap them or you can repair them. These machines are not at the age where they should be scrapped. It's a lot more reasonable in cost to repair them, bring them up to higher standards than they are now. I'm not saying they're not safe now, but they do require some money to bring them up so they're going to be able to produce electricity for the residents of Ontario for several more years. Back to the car analogy: It's a few years old, the technology's still there, the engine technology hasn't changed, but you're going to have to spend a little more money on it to bring it back up to top shape.

1620

**Mrs Fisher:** You may know I represent the riding of Bruce. As a matter of fact, I think I attended one of your conferences a year ago.

**Mr Shier:** Yes, I believe you did.

**Mrs Fisher:** The question I have is this: The mayor of Pickering, on behalf of his people, has very well described their concerns with regard to the operation and the answerability to a community of Ontario Hydro, and if I might add to it, I would expect even to the AECB realm.

You commented that you witnessed the recovery plan in operation in the British system, and yes, we did have the presentation before the committee in the past. Is it your feeling that there's an opportunity for Canada, if there are not nuclear-qualified workers today, to bring some comfort — not comfort, but some action to the concerns that are being raised by the residents of this area? If management and the workers, through the PWU and the society and the community work together to (1) better understand those problems and (2) do something constructive to address those in terms of repair and communication enhancement, is this recoverable or not at this site?

**Mr Shier:** I would say yes. Our organization has done a little bit of community public outreach. We did have a display booth in one of the local malls in the Pickering area last year where we were able to solicit some input from people and discuss aspects of the plant. Once people we talked to found that we were not from Ontario Hydro management, that we were actually from a worker organization, in our opinion they tended to listen to us. We didn't get the same read that may be proposed by a lot of people. A lot of the people we spoke to — and it wasn't a scientific survey — were not as concerned as maybe we hear. The thing that was lacking was communication. They got most of their information out of the local paper, which in our opinion tends to raise a little bit of scare

tactics on some of these issues in their reporting. That's what the people told us. That's where they were getting their information.

Yes, there has to be a lot of work done, because it's definitely quite clear that there's a different concern here in this community than there is at the Bruce, for example, when you talk to people in the public. Workers could have a very major role to play in that area. The company has to change its ways as well. I've toured plants in Europe and they have a lot different public relations as far as getting public comfort in having the plant as part of their community.

**Mr Conway:** Thank you, Mr Shier, for quite a good brief. I want to focus on one particular area. If the people of Ontario listened carefully to Mr Farlinger and Mr Andognini in mid-August, or if they were with this committee this morning listening to the Atomic Energy Control Board talk about some of the difficulties that have been experienced over the last few years at Pickering nuclear power stations, and with a particular focus on management and worker culture, they would want me to ask on their behalf, what the hell has been going on?

I said this morning to the Hydro leadership at Pickering, it's as though both managers and workers in some of these cases parked their brains on some planet outside of our terrestrial experience. There's just no easy understanding for laypeople looking at some of the problems, some of the sloppiness, some of the inadvertence, some of the laxity. What has been going on at these plants over the last five or six years or however long it is? We were certainly presented with a number of findings this morning from the AECB. How would you explain that pattern, the problems of that management and worker culture that have been highlighted, not only by the federal regulator but by Andognini and others in recent times?

**Mr Shier:** I'll make this quick. I'm not going to pass the buck. I'll make a comment on it but I suggest you put that same question to the panel which will be coming up later on from the workers.

**Mr Conway:** I'll do that, but you're my witness now.

**Mr Shier:** From my perspective, I would say there are a couple of issues here. The public relations aspect is one thing that has been very weak in this area, in my opinion. As far as the practical problems or the practical things we hear reported, a lot of them do get blown out of proportion so that it looks like there are major concerns and big things happening, for example, the siren issue and stuff like that, which are not major issues but they appear to be that way.

**Mr Conway:** That's not what we heard this morning, though. Again, just very quickly, we heard from the federal regulator telling us that some of the most routine, basic procedures that one would expect both workers and managers would do at a nuclear power station were not being done. When it was pointed out that this was a problem and should be fixed, it didn't get fixed. What is going on inside the heads of workers and managers that these kinds of things happen and continue to happen after they have been complained about?

**Mr Shier:** I hear you, but I'm going to pass that on to the people who work specifically in the station, who will give you a firsthand answer to that particular question.

**The Chair:** Mr Shier, just before you go, I have a question. Ontario Hydro has been at great pains to discuss the labour mix, the shortfalls in certain skilled areas and so forth. Is your council giving consideration to the reality and the significance of that information contained in those various reports?

**Mr Shier:** There is a shortage right now, as we've acknowledged, but we don't say that there's a shortage in the community, with the unemployment rates or as skilled trades. Other organizations do handle that.

**The Chair:** Your council has done no direct study or response to that?

**Mr Shier:** We've done no direct studies or anything. We have no statistics on that.

**The Chair:** Thank you very much for your presentation. We appreciate your evidence. You are excused. I appreciate your time.

#### MAURICE BRENNER

**The Chair:** Councillor Maurice Brenner, would you come forward, please. You will have 10 minutes for a presentation. Welcome to the select committee.

**Mr Maurice Brenner:** Thank you, Mr Chairman and members of the committee. I appreciate the opportunity to address you this afternoon.

This presentation is, in a sense, to pick up from the presentation of the fire marshal and the town of Pickering fire chief which was held on October 27, I believe.

Ontario Hydro nuclear presently lacks a balanced approach to fire safety at its plants. A balanced approach consists of three components: passive fire protection — compartmentalization by means of fire barriers; detection and suppression, which is active fire protection; and proximity to fire service, ie, building being close to fire response/firehall.

This approach is used in all of Canada's buildings except Candu reactors here in Ontario. It is also used in all buildings, in both nuclear and non-nuclear, including marine and offshore construction, in countries such as the United States, the Federal Republic of Germany, France, the United Kingdom, Korea and China. The fact is that all new AECL-Candu designs all utilize compartmentalization, sprinklers and fire service. We should expect nothing less here in Ontario.

During recent weeks, through these hearings, the lack of accountability has become very evident and how far-reaching it is in the area of fire services. Clearly it has now been demonstrated that no one appears to have sole authority over this important issue. Who is minding the shop when it comes to fire safety?

The Atomic Energy Control Board has admitted it lacks the expertise. The Ontario fire marshal's office has stated it cannot intervene unless invited in. Municipal fire service, which operate under the authority of the fire marshal's office, cannot intervene unless invited in. These facilities



are not required to comply with the Ontario building code, 1990, in particular section 3.1.9. Municipal building inspectors do not have the legal authority to require these facilities to comply with Ontario building code requirements.

While it has been argued that Ontario Hydro nuclear is regulated by the Atomic Energy Control Board, a federal authority, exempting it from lower-tier regulations, Ontario Hydro nuclear is in fact owned and operated by a provincial crown corporation and, as such, should be subject to the same strict regulations pertaining to fire and structure as anyone else in this province. The fact that you as a provincial body are having these hearings would also concur that this is a provincial matter.

**1630**

With this in mind, I wish to introduce the following recommendations which I call Fire Safety: A Blueprint for Change.

Ontario Hydro Nuclear must be governed by the Ontario building code, 1990, during its recovery process. Each plant should be required to apply for municipal building permits in compliance with the 1990 Ontario building code, OBC.

Assessments of each plant must be made by municipal building departments in the municipalities where each OHN plant is located. Alternatively, the Ontario buildings branch should act as a resource to municipalities across Ontario in this regard.

The following overriding stipulations be made in the 1990 Ontario building code, only as it relates to fire protection upgrade by the Ontario nuclear generating stations:

All service rooms, including but not limited to the following, be separate fire envelopes, separated by three-hour fire barriers as per CAN/ULC-S101-M89: control rooms, cable spreading rooms, battery rooms, MCC rooms, oil storage rooms.

All firestops, with each configuration, shall have a three-hour FTH rating as per CAN4-S115, latest edition. All firestop installations must conform to the minimum and maximum tolerance stipulations of these listings. Where three hours of temperature ratings cannot be achieved, the penetrant on the side of the floor assemblies and on both sides of wall assemblies should be treated as follows:

Cables should be coated to a minimum length of 500 mm with a minimum thickness of 1 mm of approved intumescent cable coating to prevent ignition of adjacent combustibles as well as unexposed side cable jacketing retard corrosive offgassing of cable jacketing on the unexposed side due to temperature transmission through the firestop.

Piping shall be covered with a minimum 25 mm thick inorganic pipe covering for a minimum distance of 500 mm in order to prevent ignition of combustibles on the unexposed side.

Firestops and electrical circuit protective fire barrier components must either meet the acceptable standards of CAN4-S114 or be totally concealed by a minimum of

5 mm barriers which meet the acceptance criteria of CAN5-S114.

Emergency power, including redundant safe shutdown systems and/or critical control, instrumentation and/or power cabling between the reactor and the control room, and critical protective circuits and communication or security systems must either be qualified under full electrical load and testing to CAN/ULC-S101 or be totally enclosed in barriers qualified to UL1724.

All fire protection systems and components must be listed with one or both of the following: Underwriters' Laboratories of Canada or Underwriters Laboratories Inc.

Deviations from regulations, for each configuration, must be applied for in writing, complete with drawings and descriptive text and alternative proposed solutions with a nuclear fire protection task force.

Upon issuance of an occupancy permit in compliance with the 1990 Ontario building code and the overriding regulations as stated within, Ontario Hydro nuclear plants must be operated in compliance with the Ontario fire code, under the enforcement of those bodies that are legislated through the municipal fire departments.

In closing, I am also recommending that a nuclear fire protection task force be established as a resource to the protection upgrade program, the municipalities and licensees involved, as well as to review any requests for exemptions. This group should be considered to be a nuclear protection task force and should be required and responsible to either this select committee or a body that this select recommends.

Given that time is of the essence, I am prepared to provide to this committee a list of five names well respected and knowledgeable in the area of nuclear fire safety.

In conclusion, these comments and recommendations are aimed to ensure that the taxpayers' money in Ontario that is spent on the Ontario Hydro nuclear facilities is spent on proven methods under the control of the province of Ontario and its municipalities. Fire protection in our Candu reactors can in this way be brought up to worldwide international standards that everyone can be proud of.

**The Chair:** Thank you. There is time for one minute for each caucus. Mr Galt.

**Mr Galt:** I really enjoyed your presentation. You've given a tremendous amount of information. We had before this committee a representative from the fire marshal's office. We also had the local fire chief from the town of Pickering. Neither of them had any suggestions. I was really almost embarrassed on their behalf for lack of information. You've given us a lot. You're here as a regional councillor?

**Mr Brenner:** Yes, sir.

**Mr Galt:** What is your background? Where do you get this information from? I need to know to provide some accountability and credibility.

**Mr Brenner:** I appreciate that question, Mr Galt. Actually, I submitted through affidavit a copy of material which I have researched. I have submitted it to the committee for your perusal, sir. I also have a copy that I can

leave here today, which is the Digest 07840 Firestopping, Canadian Standards, which has also —

**Mr Galt:** That was my next question. My question is your background: Are you a fire chief or have you been in the fire marshal's office?

**Mr Brenner:** No, sir. I am a concerned elected official who has taken the time to do research over the last several months to ensure that I had the appropriate information to present to this hearing.

**Mr Galt:** I was asking about walls and about wires —

**The Chair:** Thank you, Mr Galt. Mr Kwinter.

**Mr Kwinter:** Thank you very much for your presentation. I also want to congratulate you on the amount of work you've done. The question I have for you: To your knowledge, these standards that you have outlined in your presentation, have they not been met inside that facility notwithstanding that it isn't subject to Ontario building code regulations?

**Mr Brenner:** In fairness to Ontario Hydro, there's been an attempt, but unfortunately, I understand the Atomic Energy Control Board and some of its governing agencies presently are investigating some of the materials which may have misrepresented at the time that firestops were filled within the plant. I have information I can make available, but it's not yet been verified.

In effect, a lot of the areas that I've covered have not to date been addressed to the full extent that they should be addressed. It's not because there's not been a desire on the part of Ontario Hydro, but in fact the criteria are not in place so there is no set standard for them to have followed, whether it's in the trays that are used under the cable runs, which are only single-sided so they don't do any good, or where in fact materials have been applied to the fire barriers walls to a greater capacity than normally could withstand any fires, or for example, where some of the piping is plastic which is going through which would never withstand any temperatures.

The information I have would suggest that unfortunately, because the regulations have not been tight enough and the standards are not tight enough, no, they do not yet comply with some of the recommendations that I'm making today.

**Mr Laughren:** I have a brief question and it has to do with your fire protection task force. Do you see that as a permanent ongoing force that will monitor fire protection at the nuclear stations, or do you see it as a sort of a hit squad that tries to get things back in shape and then disbands?

**Mr Brenner:** I would see it initially as — I don't know if I could call it a hit squad — a recovery process task force. If the recommendations that I put forward are carried by the government of Ontario, such a task force will no longer be required because the Ontario fire marshal's office would have the appropriate authority that would allow them to do their job in these facilities as they do throughout Ontario. I suggest it would be a short-term recommendation until such time that these plants go through the recovery process that's been recommended through previous recommendations.

**The Chair:** Councillor, thank you very much. We appreciate your evidence.

**Mr Brenner:** Thank you very much. I would like to congratulate this committee on an excellent job that you have done in listening to the people of Ontario, sir.

**The Chair:** That's very polite of you to raise that. We appreciate that commendation.

JOHN WELLS

**The Chair:** I ask John Wells to come forward, please, to the witness table. Welcome to the select committee. You have 10 minutes for your deputation, including questions and answers.

**Mr John Wells:** My name is John Wells. I'm an engineer. My background is in operations research. I've worked at British Gas and I've also worked at Ontario Hydro, building models for production transmission.

I'm going to try and deal with the side of costing of trying to get the power back into Ontario. I'll only deal with the generation reserve. From my work in the past, the minimum generation reserve that you required for Ontario was 23%. I would say that with the latest moves you're way below that. From my findings, at 20% generation reserve, you were getting some rotating blackouts and you were getting a lot of brownouts. At 15% generation reserve, you were getting a hell of a lot of rotating blackouts and a lot of brownouts as well. I'm afraid that with the cutbacks that are going to be instituted through this winter, you may be in a state where you'll be getting a lot of rotating blackouts.

1640

In Ontario we have two ties: We have a tie to Michigan at 2,000 megawatts and a tie to New York of 2,000 megawatts. Unfortunately, with the amount of generation you've cut, you're going to be a bit short of capacity to bring that stuff in from the outside, but if we have a bad winter then I'm afraid that our neighbours to the south will be in the same trouble we are, and they won't have sufficient capacity to supply us. Therefore, we will have to look further abroad to bring that capacity in. My experience back in 1976, when Ontario Hydro went to look for spare capacity, was that it went down to Florida and wheeled in some 200 megawatts. We were very fortunate that the utilities between Florida and Ontario were not in any trouble.

I'm afraid that if we are in trouble and if the other utilities are in trouble, then whatever we purchase from outside and try to wheel in, will be eaten up by those utilities and I don't think we're going to see it here. So we may be on our own. I am a little worried about that. All I can say is that you'd better pray that El Niño is going to give us a very nice, warm winter, and probably even for next year.

I would say that to help to cure this, we should probably bring in the independent power producers to try to help out during this phase but if the all the nuclear plant is brought back on stream, I'm afraid that they are going to get their clocks cleaned and I would hate to see a group of



people making that sort of investment and getting wiped out because I don't think they would be able to compete. Whatever the independent power producers can produce now will be all right to meet, say, the normal daily load, but when it comes to the peak load, they'll probably have other clients for that peak load, probably themselves. This will probably occur at most of the power producers. Therefore, it's no use them competing on a normal load basis against Ontario Hydro because they are just going to get wiped out, and Ontario Hydro would have sufficient capacity to be able to deal with that. That's assuming that they bring the nukes back on.

If the plan is not to bring all the nukes back, then you're going to have to replace that with some other generation within Ontario. I think a lot of people are looking towards gas as a means of getting that generation replacement here. I think you had better look very carefully at the pipeline and the problems it has been having because I think you'll find you're going to be close to the capacity of the pipeline. The other thing you have to take care of is that you have a storage of natural gas which occurs in the southwest of Ontario, and that's where they have salt domes and they store the gas there. I think the capacity of those salt domes and on the pipeline are going to be very sorely tested if we are going to start to draw off something like 10,000 megawatts of power; to try to generate that. I think we should be very careful about doing that. Otherwise you may have to build a very large ditch between here and Alberta to get the gas again.

The other thing is that if you are going to hive off the generation side of Ontario Hydro as a separate entity and with the piling on of these costs related to the safety issues, then the generations company may want to split the two because Wall Street does not appreciate, or downgrades, any utility that has a nuclear component. Therefore, they may well want to split it off and have a nuclear generation company and then the rest, because then the rest may want to get into the gas distribution side and not be penalized by the nuclear. I'd be very worried about that, because if the nuclear company that we may want to generate has to go on to the market for cash, it may be very difficult for them to get it and it may impinge down the road on safety.

The net effect of all of this is that if you go to gas as a means of generation, you are going to increase the price of gas because of the shortage and you are also going to increase the price of electricity. If you're going to be buying electricity from offshore, then because everyone knows you're up against a wall, 10 cents a kilowatt-hour is going to be very, very cheap. I think they are going to put you against the wall and they are going to shoot at you; and that's including places like Michigan, New York and even Quebec. They'll just take you to the cleaners because you've got no defence. I think you'll count yourself lucky if you're going to get 10 cents a kilowatt-hour.

I'd like to address the future, if I have enough time. If we are going to deal with this, we have to look in terms of the long-term future. There are some more devices coming on to the market, like block storage heaters, which will fill

in the dip in the night curve. When that occurs and we've got a flat daily low curve, then we're going to be in more trouble because you are going to need more base load plant, and the only option for base load plant is water or nuclear, as it stands right now. Therefore, you are going to have to ask yourself what you are going to do for an encore because there is no more water around, therefore your only choice is nuclear. So the thing is: What is going to be the next nuclear device you are going to be putting on? This may be 10 or 20 years down the road. You may have to think about the ITER project for that. I'll leave that be my remarks at this stage.

**Mrs Helen Johns (Huron):** We might have to think about what? I'm sorry.

**Mr Laughren:** What did you say? I didn't hear you.

**The Chair:** Sorry. The members didn't pick up the last couple of comments. Would you just repeat that again?

**Mr Wells:** About the ITER project?

**Mrs Johns:** ITER?

**Mr Wells:** Yes. This is a fusion project which has begun to be situated here, possibly in Darlington, and that will give us a background of information about how to deal with fusion generation. We may need that technology down the road.

**The Chair:** Mr Wells, thank you very much. You've taken your time and I appreciate your evidence given before the select committee. We have your exhaustive document; that'll be tabled with us for consideration.

#### DAWN ROPER

**The Chair:** Dawn Roper, would you please come forward to the witness table? Welcome to the select committee. You have up to 10 minutes for your presentation, including questions and answers.

**Mrs Dawn Roper:** I probably won't take 10 minutes. I am the parent of a child with a developmental disability and I live in Ajax. We have lived here all my daughter's life. I wanted to come and talk to you because I think what you are doing is critical and I think it is particularly critical for vulnerable people who can't speak for themselves.

Only once, to my knowledge, was there ever a study done to look at the potential connection between disability and the presence of nuclear power in our community, and it ended up being inconclusive. As a member of the board of directors of the Ajax, Pickering and Whitby Association for Community Living and the Ontario Association for Community Living over the past 15 years, I know of no other effort to look into the issue. Indeed, from the point of view of a citizen, why would you? All of the information that we have ever had is that there were no accidents, there were no emissions, there were no seepages, leakages or whatever you want, and everything was contained.

My concern, and I don't understand a lot of it, is that in the past several months, there seem to have been indications that perhaps that's not true. Here we have this one report, several years ago, which indicated that there was a higher instance than to be expected in our population of serious developmental disability in our community, par-

ticularly Down Syndrome, particularly in Pickering and then secondarily in Ajax.

If we do have something to worry about, then we've got to worry about it and we've got to deal with it. I was thinking about this and talking about it with my husband. Several years ago, when the study came out, we kind of laughed when they said they were not going to look into it any more, because it didn't really matter. You deal with it. You get on with your life. You do what you have to do. There were a lot more secure social programs in place. We all know that in the era of deficit fighting, our social programs have been eroded somewhat, we are tightening our belt, and so if there's a problem, we really need to know about it, because there is an accountability issue: Who pays to support people who may have been given a specific disability?

Again, I'm not making any allegations. I tried to understand some of the material and it's very difficult for lay-people. I think that's why we've got you. I really wish you luck as you do your job, but I just wanted to remind you that there are people who can't come and sit before you, but whose presence must be here. I just wanted to remind you of that and ask you to think of them as you're looking into this.

1650

**The Chair:** Thank you for your comments. We have time for one question from each caucus. I'll begin with Mr Kwinter.

**Mr Kwinter:** Mrs Roper, I was interested in your comment about the higher, I assume per capita, incidence of Down syndrome in Pickering. Has that been substantiated by studies?

**Mrs Roper:** As I say, there was only one that I know of and I believe it was done — maybe some other people here will know — by the Atomic Energy Control Board, and I believe it was based on births. There were some people at the time who said, "Well, it's a high-growth area so a lot of people with those disabilities moved into the area." But I believe that was accounted for and that is was based on births. Certainly the region medical people would be able to tell you more about it.

But as I said in my presentation, as a member of the board of directors of the Association for Community Living, both local and provincial, I have never been approached and asked, "Where were you during your pregnancy and birth and those early stages?" That's going back 15 years — never.

**Mr Laughren:** Just to follow up on that, because your presentation is a disturbing one, even in the questions it raises, I applaud you for coming before the committee. I'm not sure whether Mr Kwinter was asking this question or not. Is the incidence of developmental handicaps statistically higher in this area than it is for the provincial norm, for example?

**Mrs Roper:** Yes.

**Mr Laughren:** We know that?

**Mrs Roper:** We know that.

**Mr Galt:** Good afternoon. It's interesting, the problem you've brought forward. I think I've heard of this before. It isn't totally brand new.

**Mrs Roper:** No, it's not.

**Mr Galt:** It certainly jogged my memory as you brought it. There certainly can be other causes, or could be many other causes. Has the study gone into looking further afield than relating it to the nuclear facility that happens to be here?

**Mrs Roper:** No. I don't believe it did. Again, it kind of made me laugh, but recently, when they had the emissions of the zinc and some other chemical, I thought, "Gee, I wonder." Because they said there was another area in the province that had the same disturbingly high incidence of disability but there was no nuclear plant there. I remember thinking when there was this recent thing, "I wonder if there was a mine or if there was some other connection." But as far as I know, they only looked at it once and only briefly, and then it's never been raised again. I really think that fails a large group of people who may be impacted in a very significant way. We just don't know.

**Mr Galt:** There is certainly a lot of radioactive material in other locations, particularly where they make the fuel and in the past.

**Mrs Roper:** Yes, who knows?

**Mr Galt:** Do you know how much higher above the provincial average? Is it 2%, 50%, 500%?

**Mrs Roper:** I'm sorry, I only had two days. I didn't have time to go to the medical health people and get the study. But I am sure it's still available with the region.

**The Chair:** Mrs Roper, thank you very much for appearing before the select committee. We appreciate that.

**Mrs Roper:** Good luck.

**Mr O'Toole:** On a point of order, Mr Chairman: If there is a baseline study that's been completed, I would ask that staff perhaps avail themselves of the public health study that has been referred to. I think it would be a good document to have reference to.

**The Chair:** While that is not a point of order, it is certainly worthwhile raising. Certainly I recognize a hand going up just asking a question and I am delighted to respond. I think it's a good question to ask.

**Mr O'Toole:** Thank you.

**The Chair:** You're more than welcome, Mr O'Toole.

#### SHERRY SENIS

**The Chair:** I ask Councillor Sherry Senis to approach the witness table please. Welcome. You have 10 minutes to make a presentation to the select committee, including questions and answers.

**Ms Sherry Senis:** My name is Sherry Senis and I am a councillor with the town of Pickering. I want to thank the select committee for allowing me to speak as a delegation today.

As I mentioned, I am a councillor for the ward in which the Pickering nuclear generating station is situated. I am also running for mayor in the upcoming municipal election



and, because of this, have spoken with countless people around the town on the subject of the plant. I will come back to this point in a few moments.

The town of Pickering, as the host community for the Pickering nuclear generating station, has been treated shoddily in the past by Ontario Hydro in that we were kept in the dark as to the operations and the safety risk, perceived or otherwise. There is no point arguing about the past and finger-pointing as to blame, but instead we must at this juncture move on and start with a clean slate while ensuring past injustices are not repeated at the expense of our residents.

How do we do this? As earlier mentioned, I have personally spoken with a good cross-section of Pickering residents while campaigning and have found Ontario Hydro and the nuclear plant are not the most significant issue in this election. In fact, the majority of residents don't feel compelled to close or mothball the plant if it is proven to be a safe operation. Instead, they're more interested in receiving immediate assurance that our local water, air quality and soil surrounding the area are safe for their families, and I don't believe this request is unreasonable.

Residents of Pickering, myself included, don't feel confident with the fact that Ontario Hydro, which tests our drinking water for tritium, is the one which is testing it. Because of the crisis of confidence with Ontario Hydro, we need immediate, independent testing done of our water, air and soil on a continuing basis. Ontario Hydro has agreed, through Mr Carl Andognini, to pay the costs of such testing.

Once the results are back and all is proven safe, the majority of Pickering residents would be content to let Hydro fix their management problems and let them get on with continued, ongoing maintenance of the plant, while ensuring the safe operation of the system as long as open communication continues to assure there are no further surprises.

On the subject of a public review under the Environmental Assessment Act, a question is posed, as you probably have already heard, as a referendum question on our municipal election ballot as to whether it is necessary, as far as Pickering residents are concerned. Although these select committee hearings serve a purpose, the provincial government must also be protecting the taxpayers of Pickering, and indeed Ontario, by exploring alternatives if and when the Pickering nuclear generating station does close in the future. Emergency preparedness has not had the focus it deserves. Decommissioning plans are a subject which must be broached and which will greatly affect our municipality. The town of Pickering must be included in the discussions.

I've already made a presentation to Mr Galt of the MOE regarding copper and zinc as they affect Frenchman's Bay. I understand studies are ongoing on this issue. Communications with the Pickering nuclear generating station, although improved, have a long way to go to reach acceptable levels. The Pickering mayor's office should be constantly kept apprised of any events that would affect

our residents and care should be taken to provide details in terms easily referenced in layman's language.

For example, if a heavy water spill were to occur, what would be the accumulated effect on the public at large? Would there be an effect on a half-mile radius, a one-mile radius, a two-mile radius? Using examples people can relate to, such as taking an airline flight etc, a hotline should be set up at the town between Gene Preston, who is the present station manager, through the mayor or acting mayor. All public contact should be through the mayor's office.

The points listed above should be dealt with on a timely basis. Pickering residents deserve immediate answers and positive action as soon as possible. Thank you very much.

**The Chair:** Councillor, thank you very much for your presentation. A question before we go into the caucus: Do I assume from your deputation that neither the medical officer of health nor the public works department does regular testing of water, air and soils in your municipality?

**Ms Senis:** The department of public health, through the regional government, does the testing, but what happens is, they draw the water and then it is given to Hydro to test for the tritium levels.

1700

**The Chair:** They don't do their own testing?

**Ms Senis:** No.

**The Chair:** They don't send that to another, independent lab?

**Ms Senis:** No. From what I understand, there are only two labs in Ontario that are capable of testing for tritium. One is with the Ministry of Labour and the other is with Ontario Hydro.

**The Chair:** I ask you that because Metropolitan Toronto has done its testing for many years and has sent all of its samples out to independent labs for testing. So I found that a curious and very interesting piece of information.

**Ms Senis:** Yes.

**The Chair:** Let me begin with Mr Laughren, one question.

**Mr Laughren:** Councillor, welcome to the committee. I'm somewhat taken aback by your call that the communication with the plant be through the mayor's office. I would have thought that was done already. If there is a problem — and maybe this is what the residents were trying to tell us earlier on — at the plant, how does the population at large in Pickering — or in the surrounding area; it doesn't have to just be Pickering — know about it? How do they find out about it besides reading it in the paper a day later, two days later or a year later? How does that happen?

**Ms Senis:** At this point in time, when we had a very heavy spill of water back in December 1994, there was a Hydro liaison committee set up. The purpose for that was to liaise with information between the town and Ontario Hydro. What ended up happening was through our town council we passed a bylaw that Ontario Hydro would be expected to advise us of any incidents, no matter the sig-

nificance to the town. Prior to that, we had received next to nothing.

Now what is ending up happening is if a toilet overflows we are advised, because it's an incident, and the significance really doesn't matter. I think maybe that's one of the problems that has ensued, that we hear about a spill of heavy water, a litre, and it ends up being published in the paper. People can't equate, as I mentioned in my speech, as to how that affects them. Is it detrimental? All they know is that there is a problem and, "Is this problem significant enough that we should worry for our safety?"

**Mr O'Toole:** Thank you very much, Ms Senis, for coming before the committee. Do you have any association with Ontario Hydro yourself — family, friends?

**Ms Senis:** No, I do not.

**Mr O'Toole:** So you just go on what the community information is.

**Ms Senis:** Yes.

**Mr O'Toole:** Mayor Arthurs's comments early this afternoon were quite scathing. In fact, I'm looking at the report. He says "a complete collapse of public confidence." Is that the generally accepted theme or tone in Pickering with respect to its dealings with Ontario Hydro today?

**Ms Senis:** I believe that most people don't believe what they're told from Ontario Hydro.

**Mr O'Toole:** Is it the recent incidents or is there one specific incident? Was it the CBC program on the 30-some — was there a specific incident or a series of incidents?

**Ms Senis:** No, I think it's due to the fact that in the past we had nothing and now we're receiving information overload. As I said, there's no way to equate whether this is significant or not. We're given a statement by Ontario Hydro that everything is fine, and then find out later that it is not.

**Mr O'Toole:** Are you for or against nuclear?

**Ms Senis:** That's a pretty loaded question.

**Mr O'Toole:** No, I mean your own persuasion, looking to the future and the stability of supply.

**Ms Senis:** To be honest with you, I don't know enough about the subject to give you an answer.

**Mr Kwinter:** Ms Senis, can you tell me in your opinion what the effects are going to be if they decommission the plants? You say that the community will be greatly affected if they decommission the reactors. Is that greatly affected because of safety, greatly affected because of the economics? What did you mean by this great effect it's going to have?

**Ms Senis:** At this point in time we don't know what decommissioning entails, so that's a difficult question to answer because not enough knowledge is out there available to the public to know what decommissioning is. If we're talking at this point in time of the possibility of closing Pickering A, what does that mean? What is going to happen to the spent reactors? How are you going to deal with the reactors that are there? Are they going to be taken out of the facility? Are they going to be left there? Who will look after the plant? Will it be still maintained or

guarded? There is so much that we don't know and I'm certainly classed as most of the other residents of Pickering who don't have nuclear knowledge.

**The Chair:** Councillor, thank you so much for appearing before the select committee. We appreciate your evidence and it'll be given considerable consideration.

#### KEVIN ASHE

**The Chair:** I call upon Kevin Ashe as the next witness. You have up to 10 minutes for your presentation, including questions and answers.

**Mr Kevin Ashe:** Thank you, Mr Chair. My name is Kevin Ashe. I live at 417 Victor Court in Pickering. I'm as well a separate school trustee for the entire town of Pickering.

I'd like to thank you for giving me the opportunity to dialogue with the select committee today. I believe my comments today will be quite different from many you've heard earlier, but I think they're very reflective of the community I belong to.

First, let me tell you a bit about myself. I come today not representing any group or organization but only my impressions of the community where I live. I'm currently a school trustee; I have been since 1985, as well as past chair of the board, and currently chair of the local education improvement committee.

I am also currently in the midst of an election campaign; I'm a candidate for regional council, ward 1. In addition, my father was the mayor of the community, MPP for 10 years, and a former Minister of Energy. He served with Mr Laughren, Mr Conway and, I believe, Mr Kwinter. I'm a lifelong resident of Durham and during my childhood from age four to 18 lived within a kilometre of the Pickering station.

My message today is quite simple. I believe Ontario Hydro has been and hopefully will continue to be an important part of our community. I am the first to admit that there are problems at the plant. I would suggest, however, that the main issue with the people of Pickering and the citizens of Pickering is their exclusion from meaningful discussion of the plant and its operation. There's a perception, and I believe it's quite right, that the citizens of Pickering have not been fully informed of the difficulties occurring at the plant for many years. I suggest that must change.

I began my comments by indicating that they, meaning Ontario Hydro, are a valuable resource that's worth saving. I want to spend my last few minutes talking about that.

First of all, from an employment point of view, they employ over 2,800 individuals at the Pickering station, of whom 66% live in the geographic area called the region of Durham, and over 500 of them live in Pickering. Certainly a sizeable portion of the payroll is reinvested in our community through property taxes, through sales taxes, through consumer spending and the like.

Currently Ontario Hydro pays in excess of \$5 million annually to the town in grants in lieu of taxes, which is a



significant part of the operating budget of the town. Without that income, property taxes would certainly increase on that portion from the town aspect.

Ontario Hydro also spends. It is my understanding over \$2.5 million worth of supplies were purchased from Pickering businesses. As well, being a Rotarian involved in the United Way and as a hospital fund-raiser, I know that they're a significant corporate citizen and that in the 1996 campaign they gave over \$200,000 to the United Way in Pickering, been involved in the hospital. I expect that Ontario Hydro will offer significant resources to the waterfront regeneration which will be ongoing in our community.

To summarize, Ontario Hydro and the Pickering plant are a resource worth saving. I urge you to take this into account when you make your recommendations. However, the underlying theme is that safety must come first.

I'd be pleased to answer any questions the committee might have and again I thank you for the opportunity to come before you today.

1710

**The Chair:** Mr Ashe, I appreciate that presentation very much and we will begin the questioning with the government caucus.

**Mrs Johns:** Welcome to the committee, Mr Ashe. It's nice to meet someone who has a long and varied time in community service. You are the first person who has really talked about the financial impact of Ontario Hydro, so I appreciate you bringing that in. We certainly heard a lot about that at Bruce.

I guess in every situation that kind of money has a different impact. In my community, that would be very substantial. Can you tell us how much of the, for example, payment in lieu would be in comparison to the total revenue generated through taxes in your town?

**Mr Ashe:** I don't have the numbers offhand, but I think the operating budget of the town is in the \$30-million to \$35-million range. The town manager is sitting behind me.

**Mrs Johns:** Yes, and he's smiling. We've already had a crack at him.

**Mr Ashe:** He can nod if I'm accurate or not, but \$5 million is a significant contribution to the operation of the town, and that's for the Hydro transmission lines as well as the actual plant itself. It is significant. I don't think there are any studies that would talk about the spinoff effect, but \$225 million is spent a couple of times and 66% of the people live in Durham, over 500 of them in Ajax and Pickering. I suggest it is a significant employer in town and one of the biggest employers in town and one that would be sorely missed if it was taken away from us.

**Mr Kwinter:** Mr Ashe, I'm anxious to get your impression of some of the things that were said to us earlier today, that there is a perception out there that suddenly Pickering is falling apart, that there are all kinds of problems. It has been here since 1971. I know that there are people who are against nuclear and have been from day one, but by and large, has your information been that generally, until these latest events were publicized, people were accepting of the nuclear facility in Pickering?

**Mr Ashe:** I suggest that the people of Pickering are still accepting of it being a continued part of our community. They are troubled by most recent events, some of them that go back many years, that we weren't aware of. I think it's a credibility issue right now and I think that Ontario Hydro has a significant challenge ahead of them to restore that credibility. I've been knocking on a lot of doors over the last couple of weeks and the issue of trust is mentioned, that word is used. I think it can be restored. They are a valuable part of the community and a good corporate citizen and there is some work to be done, but it can be restored. The communication must be open and they have to work hard at that.

**Mr Laughren:** Good afternoon. I have a very simple and direct question, and that is, do you support the call for the environmental assessment of the Pickering operation?

**Mr Ashe:** I don't think that question itself is appropriate because I don't think environmental assessment for an existing facility is the proper way to go. I do, however, believe that there should be an enquiry of some sort to deal with the issue. I really don't think the Environmental Assessment Act and the provisions of it were meant to deal with a development that has a history of 25 years or so. I do, however, think there is a need for a public enquiry or a public review of some type.

**The Chair:** Mr Ashe, thank you very much for your evidence and for appearing before the select committee. We appreciate your time and interest.

#### CLARINGTON HYDRO ELECTRIC COMMISSION

**The Chair:** Now, may we turn our attention to inviting Clarington Hydro. There are three deputants that are clustered with the Clarington Hydro presentation. Welcome to the select committee. You have 20 minutes to make your presentation, including questions and answers.

**Mr George Van Dyk:** My name is George Van Dyk. I am the chair of Clarington Hydro. Joining me are our vice-chair, Pauline Storks, and our general manager, Dave Clark. I'd like to thank the committee for the opportunity to address you today. Pauline is also the current vice-chair of the Municipal Electric Association and the chair of district one of the Municipal Electric Association.

First a little about Clarington Hydro: Clarington is the fifth-fastest-growing community in Canada and as you know, is the community where the Darlington nuclear generating station is located. Clarington Hydro is the municipal electric utility in Clarington. We serve 9,600 customers. However, we don't serve all the customers in Clarington; about 13,000 customers are served by Ontario Hydro Retail.

Our operating costs per customer are quite low. They're lower than 87% of all other municipal electric utilities in Ontario. Our sales of kilowatt-hours have increased by a total of 6% in the last three years. The utility is virtually debt-free with only 8% debt. It will be debt-free in 5 years.

About \$1 million a year is spent replacing aging distribution plant. That's about 6% of the book value of our distribution assets. Even with this capital replacement program and high growth, the commission has been able to reduce rates in each of the last three years. Over that period, our residential rates have decreased by 7.5%.

The commission has not been complacent with its good standing. Given the restructuring that will likely occur shortly in this industry, we don't feel the status quo is in the cards for Clarington Hydro. Proactive steps have been taken to look at two different utility restructuring options. In 1995, we conducted a study to look at the feasibility of expanding Clarington Hydro to serve the entire municipality. In 1997 a study was completed to test the feasibility of restructuring all municipal utilities and Ontario Hydro within Durham region.

The conclusion of each study was that expansion and amalgamation would benefit the customers of Clarington and Durham. Unfortunately, there were two municipal utilities that did not support the Durham study, which has deferred any action on amalgamation. We won't mention the utilities that were opposed; the lights might go out here.

We believe there are issues that the select committee needs to address in its recommendations. The first issue: Immediate release of the white paper on industry reform is imperative. The delay on the release of the white paper is causing serious disruption in the industry. We all like to think we know what the white paper is going to suggest, but I think there are different opinions as to what impact it will have on everyone. We think there could be a lot of counter-productive activity eliminated if we get closer to determining what this industry is going to look like in both the short term and the long term. One really has to wonder whether Ontario Hydro would establish a different strategy in their nuclear recovery plan if industry reform was better defined.

The second issue: Rehabilitation and maintenance of non-nuclear assets of Ontario Hydro. Clarington Hydro has significant concerns on how these enormous nuclear expenditures will impair Ontario Hydro's financial ability to rehabilitate and adequately maintain the rest of the system. We're seeing evidence of inadequate Ontario Hydro maintenance within Clarington.

Clarington Hydro's customers are supplied from two 44 kV distribution lines. One of these lines has a long section that is 50 years old. During the summer of this year there were 17 interruptions on eight different days on this line. We've been unable to get an answer from Ontario Hydro as to what corrective action they'll take. We've got customers that are hopping mad over this problem and we don't blame them. There's one of our customers on this line that is extremely sensitive to these interruptions. It's a rapidly growing customer that runs a number of manufacturing lines 24 hour a day, 7 days a week. Even one momentary power interruption can cost them as much as \$30,000 in equipment damage and lost production.

## 1720

We have a growing concern that this nuclear problem is being looked at in isolation. Ontario Hydro is unable to raise rates for the remainder of the century; has some \$30 billion in debt, and that is estimated to be twice as much as they should have to enter a competitive market; and is now faced with an estimated \$5 billion to \$8 billion to recover its nuclear assets, an estimate that many have little comfort relying on. Given this dire financial situation, what hope is there that the rest of Hydro's assets will receive necessary attention?

We understand that there are transmission constraints that will limit the capability of bringing supply in from neighbouring utilities, a key consideration when you're looking at possibly opening up for competition. Based upon our local experience, it appears that Hydro's existing transmission and distribution system is inadequately maintained. There are other problems at Hydro besides nuclear and we haven't heard what the pricetag may be in those areas. If there isn't an adequate transmission system to deliver electricity to the customer, it won't matter how much generating capacity there is in the province. We think there will be a short-term requirement for significant transmission and distribution expenditures. The committee should ask: Has Hydro factored transmission system expenditures necessary to accommodate a competitive electricity environment into their financial projections? Are there other options that would be less costly than the proposed nuclear recovery plan?

The third issue: real and effective regulation of Ontario Hydro. The committee has heard from the Ontario Energy Board and seen evidence of the frequent dismissals of OEB recommendations. We believe OEB's powers should have teeth and Hydro should be obliged to comply with the board's rulings. It doesn't make much sense to have these expensive hearings if they aren't adhered to.

That's not to say we've always agreed with the board on its recommendations; we haven't. In fact, we were one of about 270 utilities here in Ontario that benefited in 1997 from Hydro ignoring a board wholesale rate recommendation. In spite of our good fortune from Hydro not adhering to this recommendation, which saved us about \$80,000, we don't believe it is appropriate for Hydro to be granted this freedom to act.

Another example of this lack of regulation is the actions taken by Ontario Hydro Retail. As you have heard in previous testimony, Ontario Hydro retail doesn't even have to submit to a regulator to change retail rates. In 1995, when our commission looked at expanding its service to all of Clarington, Ontario Hydro reacted by giving higher-density customers a significant rate decrease. Courtice, the community that was most interested in having Clarington Hydro expand, was the recipient of this decrease. We believe this was a deliberate move to thwart Clarington Hydro's expansion efforts, and it was effective at doing that. Hydro lowered rates for their customers that were at risk of being lost at the expense of other rural customers where there was no risk. There have to be some controls in place to prevent inappropriate



cross-subsidization of rates in the face of competitive pressures.

In summary, it is imperative that the government steer the course for the electricity industry. The white paper needs to be released. Significant expenditure decisions cannot be made without an accurate vision of the future of the industry.

There must be due regard to the rest of the provincial electrical system. Hydro's remaining financial capacity should not be used on nuclear recovery at the expense of other key Hydro assets. These assets will be as essential as generating assets in a future competitive market.

We need an electricity system that is responsive to the needs of the people of Ontario. It is high time that the monopoly portion of Hydro be strictly regulated.

Thank you very much for this opportunity to present. We would be pleased to answer any questions you may have.

**The Chair:** Thank you very much, Mr Van Dyk. We appreciate that. We will proceed to the caucuses, two minutes for questioning. We'll begin with Mr Conway.

**Mr Conway:** Thank you, good people from Clarington Hydro. There's nothing like an honest witness. I liked your little confession about you had profited from Hydro giving —

**Mr Van Dyk:** We keep our rates down.

**Mr Conway:** Now listen, that's what I want to talk about. Given restructuring, one of the real issues is, should we have Ontario Hydro Retail and a utility like Clarington Hydro competing for customers in the same jurisdiction? I take it it would be your view that Ontario Hydro retail should withdraw from the jurisdiction of Clarington Hydro?

**Mr Van Dyk:** Yes, we do.

**Mr Conway:** Do you have any comments in terms of restructuring about there needing to be a deliverer of last resort? Do you see that as an issue in an area like Clarington?

**Mr Dave Clark:** We've just completed a study looking at the amalgamation of all the utilities and the Hydro utility within the region of Durham, and it was concluded that that could be effectively and done and the rural areas looked after too. I think there are solutions out there that can be accomplished that will look after the rural areas as well; in other words, shoulder-to-shoulder utilities right across the province.

**Mr Conway:** If you moved north into Victoria and Haliburton, would you be interested in taking over the delivery system for Haliburton county?

**Mr Clark:** There are some areas within Durham region that are as remote and sparsely populated as areas to the north.

**Mr Conway:** But for every one of those customers in Durham, you've got presumably 50 customers in areas like Bowmanville and other urban centres, n'est-ce pas?

**Mr Clark:** One of the things we found in both studies that we did was that it wasn't necessarily a factor of the density of the population but the density of the load that was significant.

**Mr Conway:** Just a last question: You make a point, and we haven't really heard too much evidence on this, but you really pointed out that there is a decrepitude about the current transmission system in that part of Ontario Hydro that you have in Durham region, and that's been serious and getting worse, I take it.

**Mr Clark:** It has been getting much worse. We have a group of customers in Newcastle that have been experiencing far from reliable power over this last summer particularly.

**Mr Conway:** Are Ontario Hydro people privately confessing that they just don't have the resources to keep those facilities up to a good standard?

**Mr Clark:** The answer we're getting so far is that there are other projects that are taking precedence over this particular project, and there is also concern being raised as to reorganization that is taking place at Ontario Hydro retail. There is a lot of uncertainty as to who is going to be responsible for those particular expenditures.

**Mr Laughren:** I assume by your brief that you are in favour of competition entering the electricity market. Is that a safe assumption?

**Mr Clark:** Yes, we are.

**Mr Laughren:** On page 5 you talk about when Hydro headed you off from expanding your jurisdiction by engaging in a very competitive practice. Do you think the private sector wouldn't do that in spades. Why wouldn't they be at least as competitive, if not more so, than Ontario Hydro? They would have a very tough bottom line to think about.

**Mr Clark:** In response to that, we're not afraid of competition whatsoever. We feel that what took place in 1995 was there was cross-subsidization of this higher-density area from the rural rates. It gets to our third point, really, that we're not afraid of that as long as there is adequate regulation to prevent that type of activity from happening.

**Mr Laughren:** Why couldn't a private operator cross-subsidize as well? What's wrong with that? I don't understand.

**Mr Clark:** That is a concern, but if we're dealing with the monopoly end of the business, there will have to be —

**Mr Laughren:** No, I'm not talking about monopoly; we're talking about in a competitive market. It could be a private operator who had a high-density area and a less dense area and would do whatever they could to maintain and expand their market, surely. I just don't understand the point.

**Mr Clark:** We're not afraid of competition whatsoever, as long as there's an even playing field. Ontario Hydro is our regulator and makes the rules that we have to follow as far as setting our rates. We can't do the same things that Ontario Hydro can do right now.

1730

**Mr Laughren:** But then you'd be calling for a regulated private sector.

**Mr Clark:** No. I think the monopoly portion of the business has to be regulated but the portion that is not

deemed to be a monopoly would not have to be regulated to the same extent.

**Mr Laughren:** So you would throw it wide open and you wouldn't object to practices by the private sector to cross-subsidize if they weren't a monopoly.

**Mr Clark:** As long as we're working on an even playing field, we have no objection.

**Mr Laughren:** Well, that's what I'm talking about.

**Mr O'Toole:** I'm inspired by Mr Laughren's pleading for the competitive marketplace; it's a real revelation. I think he has grown with the experience on this committee and his experience over the last five years.

The humour aside, I commend the commission openly for their concerted, genuine effort to reorganize and realize the economies in the one utility for Durham. I commend you for that. It shows vision, leadership and confidence, something in scarce supply today. I want that for the record.

There are members of Ontario Hydro here, surreptitiously hanging around, listening to what's being said.

**Mr Conway:** Bill Farlinger is watching.

**Mr O'Toole:** Yes, Bill is watching. I'm sure they've heard your cause with the high-voltage lines that service the municipality of Clarington. I would urge you to write to me as your member and I will make sure that he gets it personally.

On a more sincere note, we've not heard —

**Mr Conway:** That sounds like a politically motivated question.

**Mr O'Toole:** I know. There are times and places for everything.

I have to comment that the elected leadership of the municipality of Clarington, outside of you as elected commissioners, has not taken the opportunity to prevail on Ontario Hydro to date. In my view, silence is acceptance. I'm getting quite a mixed story on the three station sites. Bruce is a community widely embracing nuclear operations. That's what it said clearly. What I hear at Pickering, where we should be today — but we're in Oshawa, neutral territory, I guess — is a lot of community angst. Without putting you on the spot, are the nuclear operations and the interrelationship between the community, of which you're a significant part as elected people, and myself, accepted in that particular operation, the Darlington site? Is it a good, willing partnership?

**Ms Pauline Storks:** I would say yes.

**Mr Van Dyk:** I think there's a good working relationship with us, other than the equipment failure on their part. They are good listeners; they're very slow doers.

**Mr O'Toole:** The charge of this committee is community safety across Ontario, and there's a further requirement for the assurance of supply. That's an important concern of this committee as well. I'm reassured that nuclear safety in Clarington seems to be working favourably in that community. Thank you for appearing here today.

**The Chair:** I'd like to thank the witnesses for their evidence and the presentation. Thank you for being here.

I think I should be writing an Ontario book of quotations. I've noted this again, "good listeners and very slow doers." I suppose that would apply to a lot of people, as an Ontario witicism. Good comments. Thank you so much.

## ONTARIO HYDRO EMPLOYEES

**The Chair:** Our next witness is the panel of employees. I have three listed on my calendar. There will be up to 30 minutes for the presentation and questions and answers.

**Mr Peter Falconer:** Thank you for this opportunity to talk to you. My name is Peter Falconer. I've worked at Ontario Hydro, Pickering, for about 16 years. I live on the doorstep of the Pickering plant. My house backs on to the land that is owned by Ontario Hydro. The park that was referred to earlier backs on to my house. I can look out my bedroom window and see all eight units of that plant when the trees don't have leaves on them.

**The Chair:** Thank you, Mr Falconer. A little more than I needed just to identify yourself to start with, but I appreciated the scope of your identification. I would just ask the other two to identify themselves and then we can proceed any way you would like to present your evidence.

**Mr Bob Peters:** My name is Bob Peters. I work at Darlington nuclear generating station. I've been an employee at Darlington since 1989. I am a mechanical maintainer and I just happen to be a joint health and safety committee member for the last seven years at the station.

I thank the committee for the opportunity to speak. I have a presentation that I will be giving. I regret to inform you but I forgot to include one part of the presentation, which is a copy of the work standards handbook for maintenance staff at Darlington. I'd like to have this entered as part of the exhibit.

**Mr Dave Milton:** My name is Dave Milton. I work at the Pickering nuclear plant as a nuclear operator, actually charged with the responsibility of operating the reactors. I've been there for 16 years. I'm also an executive board member of the Power Workers' Union.

What Peter and myself and Bob would like to do is a little different from the earlier groups. You have a copy of our submissions. We raise some issues in those submissions, but what we'd like to do is turn it over to the select committee members for any questions with regard to our reports, or any questions they may have in their minds that were raised by previous submissions. We'd like to turn it about and give you more time to address us and ask us things and see if we can reply and fill in some of the voids of information that still may be there.

**The Chair:** I assume you have a written copy of the presentation you wanted to leave with us.

**Mr Milton:** There should be two.

**The Chair:** You will file a copy of that handbook that you've indicated; we'll take that as well.

With that in mind, we'll turn the questioning open and begin with Mr Laughren.

**Mr Laughren:** Welcome, gentlemen, to the committee. As employees, it must be difficult sometimes in your own



community when you hear a lot of the negative publicity surrounding the plant, especially at Pickering. One of you works at Darlington and the other two at Pickering. I'm wondering how it affects you on the job when you read about the bad publicity, when you hear it in your own community. As well, when do you hear about the problems? Do you hear about the problems before anyone else does?

**Mr Milton:** I'll comment on that first, and then Peter and Bob may want to comment on it. Particularly at Pickering, I think there's a sense of frustration with the workers there that we and Ontario Hydro, we as individuals in our communities and Ontario Hydro as the corporate citizen in the community, have been unable to explain ourselves appropriately, explain the problems we've experienced. We've found it difficult translating our technical jargon, our Hydro jargon, as people may call it, in laypersons' terms.

There are incidents of varying severity that have happened in Pickering over the years. Almost exclusively, the media portray them all as very serious. We've had difficulties and we're frustrated that we can't seem to make a significant portion of the community understand, "Yes, there are some that are significant, and here's our explanation and here's our understanding, but there are many that are of less significance, have little or no impact on you and the community, and here's why." So that's a bit of our failure as employees and I think a bit of Ontario Hydro's failure.

On your second point in that question, when do we become aware of issues, there are varying degrees within the station. Those individuals such as Peter, myself and Bob, who I would say are directly on the workforce of the reactors — we work with them, we follow the procedures, we deal with those — we become aware almost instantaneously. In fact, in many cases we are the individuals who identify the problems and report them to our supervision.

There has been an improvement within Pickering, I'll speak specifically, on communicating what we find out about almost instantaneously to all the other employees, I would say, who are more remote from the reactor face: the support staff, the clerical staff, the technical staff, who predominantly work days and are not there around the clock. So Ontario Hydro, at least at Pickering in the last couple of years, has improved that dramatically through our e-mail systems, through our bulletins, through our pre-job briefings with our supervisors in the morning, so if I report something to my supervisor, the next day all the other supervisors will discuss that with their other workers so they are more educated and aware of what the issues are.

1740

**Mr Laughren:** Thank you. As you might know, we were at Pickering this morning and had a presentation by AECB, and part of the presentation were some quite graphic pictures of what was really bad housekeeping at the plant. I think a lot of us on the committee, and I won't speak for other members, were scratching our heads and saying, "How is this possible?" It was so obvious, and

even though I'm not an expert I could have said, "That's wrong," and believe me, I'm not an expert. I asked the question of the people at Pickering and they said, "Well, over a period of time it deteriorated and it didn't happen overnight," and so forth, but the AECB keeps coming forward with these reports and there's lots of evidence too. It's not just scaremongering or anti-nuclear people saying it. Have you got an explanation for that?

**Mr Milton:** I'll talk in general and then maybe specifically to the housekeeping. In general, I think the way the way to approach this, and this is a generalization, is that throughout the 1980s — I think you heard this from the AECB and from other individuals — Pickering performed at the highest levels in the world, their capacity factors, their costs, and other utilities came to us to learn how to do things better. What we I think did collectively as a station is that we started to rest on those past successes. We got overconfident. We did not apply what most businesses would call continuous improvement principles, where you can't just stay there. You have to keep on raising the bar and striving to improve. In fact, the rest of the nuclear industry did that. They caught up to Pickering and passed Pickering. We rested on those laurels.

Why did we do that? There is a whole host of theories. Mine, being at the plant and seeing what developed since 1981, since I've been there, is that around 1988-89 and into the 1990s we went through budget cuts, staffing cuts that demotivated people, that affected morale, that made it difficult to accomplish the necessary tasks with the resources that were allocated. We shifted, as an organization, as management set directions and goals, from safety first at all points to safety if it's not really too serious and "Let's not compromise productivity." That mixed message got out.

I'll give you an example. Before, if a procedure was being followed and could not be followed according to the procedure, in the 1980s it would have been: "Stop the work immediately. Let's get the necessary people together and review this before we do anything." What became apparent in the early 1990s was: "We don't have those people. They're not available. Go ahead and do it the best way you can." As a worker, if you beat your head against the wall, you only beat it so often and then you say: "Well, they're not caring. They are not wanting to strive to higher standards. I'm tired of doing it myself. I'll do the best job I can. I'll do it as safely as I can." That will lead to an increase in human error, when you set up an environment like that. That has slowly started shifting. With regard to housekeeping, I'll ask you the question: You were at Pickering. Did you see an improvement from the pictures?

**Mr Laughren:** Yes. May I ask one final question? Do we have time?

**The Chair:** You may indeed.

**Mr Laughren:** What are your views on the call for an environmental assessment?

**Mr Milton:** I think it's an inappropriate forum. I understand the community wants. I was at the town council meetings when the bylaw was passed. I was at

Sally McLeod's first town meeting. What I clearly heard from — if you take away all the Hydro people, the Power Workers' Union people, the anti-nuclear people — the citizens of Pickering who didn't belong to these affiliations was, "Is that plant safe?" I think what an environmental assessment hearing does is open up the Pandora's box of the future of the nuclear electricity industry and do nothing to answer the question of whether Pickering is safe. What is needed is an independent task force or committee that will look at those questions that Councillor Senis raises about drinking water, about air quality, about the land, about what is going on in the plants. Give us detailed information about the alarm that went off. Put it so we can understand it. Get a dialogue going.

What I think should be happening and what we asked for is for this select committee to consider the creation of some kind of ongoing, community-based, regular monthly or quarterly committee meetings where we can have this dialogue. We have offered to the Power Workers' Union that we would attempt to set that up and give information as we get it and share that with the community, because through dialogue, through education I think we'll be able to solve many of the concerns in the community.

**Mr Galt:** Good afternoon. Thanks for the presentation and for being with us. We have heard all kinds of stories and they are starting to sound awfully similar, everything from the nuclear culture, the management gets the kind of union it deserves, and I thought maybe we were in trouble. It's not just nuclear as you look at Ontario Hydro. Back in the 1980s I was hearing all these stories about one person working up the pole with 10 watching. Those kinds of stories are telling us there's a problem in that organization. Obviously, from some of the pictures we saw today, that didn't just start yesterday. It was pictures of the fact that people didn't care about their workplace regardless of what management or worker level they were at. Is it as simple as you're describing it: "We got here just because we thought we were the greatest; we just kept looking inward and didn't look out to see what else was going on"?

**Mr Milton:** I don't think it's as simple as that. I think that's a strong element. If you look through particularly the last three years, what Ontario Hydro employees have gone through, in particular Power Workers' Union members, we've lost over 5,000 members to cuts, budgets have been cut at Ontario Hydro, there's the constant debate in the communities and in the province about privatization, about competition. While those things are necessary and have to continue, there's an effect on the human being. You're concerned about job security, you are concerned about your future, you are concerned about your health, your wellbeing, and I think anything that can distract your 100%, undivided attention from your task at hand can end up producing performance that is not excellent. While it may be safe, it's not where it should be.

**Mr Galt:** I think you'd agree that this started long before 1993.

**Mr Milton:** It did, but to be honest, I really think it gained momentum in around 1992-93 because it takes a

while for budget cuts and staff cuts to have an effect. When there's a cut in people there isn't an immediate effect that next week the performance starts to suffer, standards start to suffer. It takes time.

**Mr Galt:** As representatives of the Power Workers' Union, are you prepared to be part of the solution to this problem?

**Mr Milton:** Absolutely, 100%.

**Mrs Fisher:** I'm the member for the riding of Bruce and I asked this question of the Power Workers' panel that was at our hearings last week. I also asked this of Mr Murphy at the hearings in Toronto: We had the experience of seeing the British model, and further to having the opportunity with Mr Murphy and with the panel, we had correspondence with Mr Murphy indicating a desire to move forward — I'm not suggesting it was uncooperative before — in an even more cooperative way today. Have you had the opportunity to see the British presentation?

**Mr Milton:** Just earlier this morning I got a copy of it and scanned over it briefly.

**Mrs Fisher:** I would ask if you think it would be reasonable that all the workers see it.

**Mr Milton:** I have no problem with that, none whatsoever.

**Mrs Fisher:** We're looking for solutions here. We're not so much looking for dwelling on the past and who's to blame, at least I'm not — I'll speak for me — and all that type of thing. If you had a chance to scan it, you know that the results from it were very positive, and it does in some cases mean fewer workers, but it doesn't mean workers who are demoralized, it doesn't mean workers who won't perform; it means higher safety performance, it means merit increments, it means the right to shares in the company. It means just a multitude of improved factors, if you will: higher consumption because of demand and all those things that happen to a society because something is going well.

There's a whole different attitude in this community compared to the one where I come from. Do you believe that the workers of Ontario Hydro in general — I know you are speaking for your site and yourself, for Darlington — can see that they're going forward? Do you believe we can reach the goals we need to reach in bringing nuclear excellence back to Ontario?

**Mr Milton:** I would speak for the people I represent at Pickering, over 2,100. The answer is yes, but there is cautious optimism and concern because we've been on record as an organization — I've been on record at Pickering town council, John Murphy has gone on record — as willing to sit down with the company and look at creative issues, look at different non-traditional ways of solving the problems. We have not met with open arms from the company yet and we're a little cautious and a little concerned. We're prepared to do it but you, Mr Ontario Hydro, so to speak, have to be serious about this and prepared to sit down and both parties have to be flexible and have some give and take and maybe give up what are viewed as traditional roles or powers or prestige and do what's best for everybody.



1750

**Mrs Fisher:** I'm hopeful that actually we can move forward that way, and that includes the Pickering site as well, by the way. Some people think because I only represent Bruce that's all I'm worried about, but I started at Pickering in 1970 and I knew what nuclear excellence was.

I was very discouraged this morning from some of the presentations, but I personally believe that the workers are committed. I know management is committed. The corporate head office has to be committed. Government has to find an answer. I think it's going to be a joint effort all the way around to make it work if it's going to be recovered.

**Mr Kwinter:** Mr Milton, this morning we had a presentation by AECB with photographs showing some of the maintenance problems, and also the AECB representative suggested that notwithstanding that improvements were being made, he was still very sceptical about whether it's going to be maintained, whether the ability is there, whether there is a culture to allow that to happen. Notwithstanding that, when we visited the plant, and I'm just a layman, and I walked down that long passage past the four A reactors and saw the airlock rooms, to me it was absolutely sparkling. What I really want to know is, is that just a showcase for visitors as they come in or is that what happens throughout the whole plant?

**Mr Milton:** We've been asked that more times than I care to remember, particularly since our two open houses we've had this year where we had some 5,000 various residents come through the plant.

No, it's not a showcase. Is it recent? Yes, it is. These initiatives are things that have happened over the last two and a half to three years, albeit not fast enough and maybe not at the pace the AECB would want, maybe not at the pace we would want, but they were things — we were prodded by the AECB on the various pieces of documentation and we took action in those areas. They have been sustained for the last couple of years now.

I think what corporate management has done to clearly give an indication that they're serious about their commitment to improve and sustain that improvement — Pickering has been less staffed or more understaffed compared to any other nuclear sites in Ontario Hydro on a unit basis, per a megawatt basis. We are understaffed compared to the nuclear reactors in the United States. We presently have about 2,700 and change regular permanent staff. What corporate management has said is that for a four-unit station at Pickering you need 1,800 staff, and to have eight units running at Pickering, because there are some economies of scale, it wouldn't be 3,600, it would be in the range of about 3,400.

They've started some of that already. We've gone from a low of 2,400 a couple of years ago to 2,700 now and going up another 700. That's an indication that you will have the skills, the resources, the people, the moneys necessary to sustain your improvements, because it requires enormous energy to improve and then you have to sustain that improvement. I think it can be done and it has been done so far in some of the areas.

**Mr Conway:** Mr Milton, I want to explore the question of the deployment of human resources. Ernst and Young in their financial analysis of the so-called NAOP, the nuclear recovery plan that the corporation has embarked upon, raised as one of their concerns the ability of the corporation, the ability of Hydro, to manage the human resources in a way that will make this thing work.

A number of people have commented over the years that the collective agreement at Ontario Hydro Nuclear is quite a remarkable document and not always the most flexible and most creative of agreements. It certainly is the view of some that one of the very real impediments in making this nuclear recovery plan work is the ability of management and labour to move people around when they're required for movement to get the right mix. Is that a legitimate concern in your view? What should this committee know about that issue, from your point of view and your colleagues' point of view?

**Mr Milton:** Some of the committee members have been given their politically motivated speeches or questions. Maybe I'll give mine. I don't think there's an employer anywhere in the world who if asked — where they have a union and have a collective agreement — is the collective agreement a barrier to their being more efficient and improving and getting better, would say that no, it's not a barrier. I would respectfully submit that any employer would say that.

That being said, it was signed by both parties. There are rules to follow within that collective agreement. We have indicated in writing to Bill Farlinger that with respect to the movement of staff, particularly within nuclear, we are sensitive to why that has to be done and why it has to be done properly and we're prepared to sit down and negotiate some creative methods to do that. To date, my understanding is that the documents have been exchanged between John Murphy, Peter Kelly, Bill Farlinger, that type of level. Some preliminary dialogue has gone on to how that can be accomplished.

**Mr Conway:** One of my concerns is that over the last number of years a lot of people with good intentions have agreed to sit down and discuss a lot of things, and a lot of things haven't changed. We had some very good testimony from the people at British Energy, who said: "No, the union's not our problem. We are a unionized shop and the union wasn't the problem." In fact the union was very creative and helpful in working that company out of a very difficult situation.

I certainly don't view myself as anti-union, but I can say this: When we've got a situation, when we've got a company that's a monopoly that is providing electricity and is substantially a nuclear company, you don't have to be Albert Einstein to see where problems might arise, and they have arisen. I saw Murphy's comments in the *Globe and Mail* yesterday, and he and Chairman Bill, apparently, are at the summit negotiating these matters. I just hope that we are not going to be faced with a situation that is going to be problematic here.

**Mr Milton:** I'll just make one more comment and Peter Falconer would like to address that a bit. Without

getting into the specifics of some of the dialogue and paperwork that are exchanged at that level already, I think it would be achieved rather quickly if Mr Andognini had the authority as the chief nuclear officer to sit down with John Murphy and people such as myself to work that out. What happens in a company the size of Ontario Hydro or any large corporation is that there are the Karen Robinsons of the world, there are the vice-presidents of other areas of the company, and they're saying: "Whoa, we don't want that done in nuclear. That will affect us over here."

If Mr Andognini was left with the directions from Mr Farlinger, "You sit down with Mr Murphy and work out what you need in nuclear; I'll take care of the problems with the rest of the company," I think that could be done.

**Mr Conway:** Would it be easier if we just aggregated Ontario Hydro and separated out some of these players and divisions?

**Mr Milton:** Do you mean through the white paper or some initiative like that?

**Mr Conway:** Nuclear is a very special commitment. I think that has been acknowledged for a long time. I've endorsed the commitment for my entire public life and I'm not prepared to back away from it now. But I'm going to tell you that when I saw Chairman Bill do his little song and dance on August 13, it became a little bit harder to be supportive. Having said that, my question remains: Would it be easier to break the company up and separate, say, nuclear out from the rest of generation?

**Mr Milton:** Would it be easier? I don't know. What I think has to happen to make the types of discussions fruitful that you're talking about is that the corporation has to continue at the corporate level on this learning curve that it is in the nuclear industry business. You heard Chairman Bill say, "Jeez, we kind of got overwhelmed by this nuclear cult." They had a responsibility to listen. We were presenting information. We were telling them the effects of the cuts they wanted, but they weren't listening. Now they are.

**1800**

**Mr Conway:** My final observation on this, and let me be really provocative: What do we know about this situation from a labour-management point of view? Any of us who have been in government have faced this. We've got a corporation that provides an absolutely vital commodity, a state-owned company that's overwhelmingly nuclear. Everybody knows we can't take a strike. It's one of the great fictions of Ontario's public life. We cannot take a strike in our public utility when that utility is 65% nuclear. If it were 35% nuclear, maybe, but it's not; it's 65%. So if you start with a situation that you're in the electricity business in a province as big and as empty and as cold as Ontario and you can't take a strike, and it's a state-owned enterprise, you could imagine what flows from that. I think even I could appreciate some of the difficulties and opportunities that both labour and management might have in this situation.

**Mr Milton:** That doesn't require an answer.

**Mr Conway:** I guess it's self-evident.

**The Chair:** All right. The plane has landed.

**Mr Falconer:** Could I just respond for a second?

**The Chair:** Yes, please do make a very brief response.

**Mr Falconer:** I had the pleasure about two years ago to meet a man from British Nuclear by the name of Paul Maycock, who came and took a tour of Pickering with two of the union representatives who worked in the Heysham plant. He was the manager of that plant at the time. We had a rather long and very informative discussion with him on management and union relationships.

Basically the way Paul put it to us was that when he was faced with a problem, and that could be something as serious as his corporate office saying, "We're going to downsize you, we're going to cut your budget," he did not go away to a room with his managers and decide, "This is what we're going to do and we're going to enforce that on the people who work in the plant." He immediately brought in his union representatives, he sat down with those people and he discussed thoroughly what the problem was, how they were going to address that. They may turn around and say, "We're going to fight corporate office because we don't think this is right"; conversely, they may say, "Where can we make these cuts in an effort to ensure that we can still produce a safe product?" He was very open about that and, as he was discussing this, I checked with the union people who were there and they backed him up 100% that that is how it's done, that is the British model. Currently, I don't believe that is the model within Ontario Hydro.

**The Chair:** All right, gentlemen. Thank you very much for your evidence and for being here to present to this select committee. We appreciate that very much. You are excused.

**Mr Falconer:** Thank you very much for the opportunity.

**The Chair:** We will pick up a copy of that handbook for the evidence.

FRANK ADAMEK

**The Chair:** The next witness is Frank Adamek. Welcome to the select committee. You have 10 minutes to make your presentation, including questions and answers.

**Mr Frank Adamek:** My name is Frank Adamek. I don't work for Hydro — I'm a freelance consultant — but I've had a close association with Hydro over the years and I am quite dismayed about what I've seen. I'll start reading this. I'm not accustomed to public speaking. I am more at home in a control panel or at a keyboard.

**The Chair:** Frank, there has not been one witness as yet dying of bite wounds, so just relax.

**Mr Adamek:** I expect that Ontario Hydro management, along with the trade unions and the engineers' union, are vigorously petitioning this committee to give them carte blanche authorization to restore Ontario Hydro back to its former status as one of the top power utilities in the world. They no doubt are assuring you that they can do this on their own, without outside help or intervention.



After all, they are the experts and best qualified for the task.

My counter is simply this: True experts and real professionals would not have permitted the utility to decay to its sad state today. I recognize that there may have been some assistance from previous government appointees, but there is logically no reason to expect that those who were primarily responsible for the problem are the best qualified to fix it.

Enormous manpower will be needed to assess the current status and to restore some, or optimistically most, of our nuclear plants to a safe and economical status. Therefore there is no option but to utilize most of the resources available within Hydro. However, I urge that outside expertise be utilized to address abusive union powers and to advise, audit, review and, in key areas, to approve internal administrative procedures. Budget estimates and economic analysis and justifications for plant repairs, modifications and upgrades, along with projected revenues, also will require close scrutiny. You can't just take their word for it. In case of disagreement, the outside authority must prevail.

I would like to stress that it is not the technology that has failed. What we have is a classic case of bureaucratic bungling reminiscent of the worst of the old Communist empire and many Third World governments.

I concede that I have a personal bias on the subject since I was a part of the pioneer team that designed Canada's first full-scale commercial nuclear power plant, Pickering A. After unit 1 construction was finished I was at the site as the engineer responsible for commissioning the liquid zone control system which controls reactor power and neutron flux tilt.

Because Canadian expertise and experience were valuable assets in the US in those days — quite a turnaround — I had the opportunity to work at several US locations. Before returning to Canada for family reasons I was Bechtel's senior startup commissioning engineer for a pressurized water reactor being built in Iowa. Based on my first-hand experience in both countries, I can say that the Candu system was second to none and that I could be proud of Canada's accomplishments.

After my return to Canada, I did not have any direct contact with our power plants for some time. I was occupied with many interesting projects, including conceptual design studies with the European fusion research community. However, last winter I found myself back at Pickering after an absence of 25 years. I was part of the jumper reduction team. That proved to be quite a shock. Pickering was not the same place that I remembered. What had happened?

The Andognini report acknowledged that the Candu system was robust. What was tactfully left unsaid was that the Candu reactor system must have been very robust in order to have survived operational and maintenance abuse for so long. The Pickering I saw in the winter of 1997 had degenerated into a tight, inbred club which had little more going for it than the similarly inbred anti-nuclear club. In some respects it might be considered worse. At least most

anti-nukes are driven by a blind but honest faith. They appear to have no financial rewards.

This appears not to be the case at Hydro Nuclear. Pickering had an overabundance of heavily entrenched and highly overpaid bureaucrats whose sole interest was self-interest. Their primary skills were related to the avoidance of responsibility, passing the buck and perpetuating their empire. Nowhere in my long life and many travels have I seen this perfected to such an art form. In its own warped way it was awesome.

How and why this once-proud organization strayed to this low level can be debated endlessly. The fact remains that the damage is done. The important issue now is what is to be done about it and how. It is necessary to get into full damage control mode and to do so quickly. Furthermore, we cannot afford the luxury of pandering to the sniping and gloating of the anti-nuclear establishment.

There is nothing wrong with our nuclear technology. If you turn over a well-engineered and reliable car to a careless driver and an incompetent mechanic, it is not difficult to visualize what the fate of that car will be. Why would a complex and sophisticated piece of machinery be any different? Of course, the car analogy is simplistic. One can easily replace a few drivers and mechanics, assess the damage, fix the car and be on your way. It is not so easy to replace a few thousand operators, maintenance crews and engineering support staff.

Fortunately there is no need to do so en masse. My observation at the site was that many of the professional and technical staff are willing, ready and able to do serious work. The system imposed on them by inept and/or self-serving managers prevents them from being effective. Please note that when I use the term "management," I include union bosses with their own self-serving union credo.

#### 1810

Before any meaningful reconstruction can begin, this cancer must be removed, and must be removed skilfully, or it will grow back. The next step is to realistically assess the physical plant damage and determine what, if anything, is salvageable. If salvage is economically feasible, get on with it. The final and most important step is to set up a mechanism to continually monitor for re-emergence of the old cancer and for timely and positive corrective action. Third-party assistance and/or intervention is a must at all steps. The only way to minimize the negative aspects of inbreeding is to introduce new blood. It works for dogs, horses and managers.

Unfortunately this third-party involvement will not be easy to implement. At the Pickering site I sensed considerable hostility by many towards outsiders such as myself. It appears that our experience in the real world outside is seen to be a threat to the security of their club, and they are correct: It is a threat.

To further muddy the waters, there is a widespread belief in Ontario Hydro that the status quo will continue indefinitely because the AECB cannot or will not shut them down. They believe that one government agency would never choose to do anything that might create hard-

ship to their brethren in another government agency, which includes crown corporations. My experiences in the nuclear fuel industry suggest that this belief does have some basis, and I am prepared to expand on that privately.

We are in a serious economic and social crisis now. Band-Aid patches and/or political posturing are not the solution. We need calm, rational and timely damage control measures. The anti-nuke groups want a complete shut-down. This is unrealistic. The union and old-guard management are trying to hang on to the status quo or some variation of it. This is also not realistic. There are contradictory economic analyses and projections. Frankly, I wouldn't trust either camp. Furthermore, it makes no sense to be guided by or to accept advice from the very people who are acknowledged to have created the problem and who are an integral part of the problem. Impartial third-party input and involvement is imperative. I suggest that the engineering profession and the manufacturing sector become seriously involved via some coordinating and mediating organization. I suggest that the PEO take on this role.

Because Ontario Hydro is a crown corporation, the final responsibility for corrective action is of course with the current elected government. Like it or not, that's the reality.

Because of time constraints, I can't delve into details. Briefly, in addition to the general issue of mismanagement, the following are specific issues which I consider to be the most urgent areas of concern:

Damage control, which includes an unbiased and realistic assessment of current status and inventory and an evaluation of options: shutdown, temporary repair, long-term upgrade, privatization.

Union power. Please note that I include the engineering union or society along with the Power Workers' Union. The flagrant abuse of this power is a major factor in the general lack of accountability and responsibility.

The delicate but crucial issue of quality assurance. There's no denying that an appropriately considered and well-implemented QA program is an asset to any organization. Unfortunately, QA is a double-edged sword. It can also be misused by management to abrogate personal responsibilities, and when allowed to go out of control it supersedes and replaces responsible engineering judgement and practice. The end result is uncontrolled cost, inferior product, low morale and compromised safety.

**The Chair:** Mr Adamek, I've let you go over the time because I know the committee is quite attentive to what you're saying. How many more pages might you have in your presentation?

**Mr Adamek:** I've just got one more point.

The state of administrative, operational and plant maintenance procedures is another issue. Documentation is cumbersome and in many instances it's incomprehensible. When comprehensible in the literal sense, procedures are often contradictory. There will be a massive effort required to clean this up. In fact, I think one of the former speakers brought this point up too.

If one can economically justify putting the plants back into service and if the above issues can be resolved, the subsequent technical challenge to get a plant up and running will be trivial by comparison. For the sake of our economy, I wish you success.

**The Chair:** Mr Adamek, I thank you very much for your presentation. That concludes your time and there is no time for questioning, but I hope you will table a copy of your presentation with the clerk so we can make sure a copy is given to all members.

**Mr Adamek:** I brought 25 copies.

**The Chair:** Good for you. We appreciate that very much. We'll distribute those to all members right now and we thank you for attending upon the committee, for your submission and for your interest.

### RICK MARSHALL

**The Chair:** Is Rick Marshall here, please? Good, we're able to deal with you now, Mr Marshall, if you'd be good enough to come up to the witness stand in a moment. Welcome to the select committee.

**Mr Rick Marshall:** My name is Rick Marshall. I live in Cobourg, Ontario. As I say in my presentation here, I wear three hats. I'm a Hydro employee, I'm a PWU member, but I'm also a ratepayer, a taxpayer and a parent. I want to start off by thanking you all for giving me a chance to make somewhat of a presentation tonight, and I do so without prejudice.

My first concern is that normally when I've seen an expenditure of this type, especially by a public corporation, it seems to me that there have always been a number of impact studies, environmental studies, a lot of studies I've seen before. To date, I don't think I've seen any of those types of studies I'm speaking of.

The first question that comes to my mind that I've jotted down here is how the decision came about for an American firm to do this. I'm of the understanding that, say, a German or a French — it seems if you look in the top capacity factors of our business, which is nuclear, I don't see an American firm in the top probably 20 or 30 reactors in the world. So that concerns me.

To that end, in a search for an appropriate adviser, to justify the statement that I don't think the person who was asked to do this and did the search for it — we all know his name. He resigned. That concerns me too. Nobody has been given an explanation, at least I haven't, of to why he resigned. So that concerns me.

I have been quite active in trying to witness all the parliamentary channels and all your hearings and I must say you have a pretty impressive list of people who have witnessed before you. I've seen British Energy, I've seen Natural Gas, I've seen a lot of people. It must be hard for you to stay on track, because it seemed that their subject was more towards, say, privatization or something rather than the IIPA report. I imagine it's pretty tough to stay on track. That concerns me. I hope and, from all I've seen from you, trust that you're looking at this carefully and



that it doesn't cause any conflicts of interest or that the subject doesn't get changed from one to the other.

My next concern is the safety of our operation of the affected reactors, those being the seven that are being laid up. You probably beat this one to death, and I've got testimony here from many different aspects. My concern is the excuse given for Pickering A having to be shut down at the end of the year. I believe that statement is totally untrue. At least two of these units, being units 4 and 1, I believe could have been run indefinitely. The repairs that needed to be made — the plug was pulled almost immediately — could have been completed by the end of the year — granted, with some effort, but that would leave them available for an undetermined amount of time. Regarding the Bruce A units, I was speaking with somebody yesterday and it has been discovered that units 3 and 4 have nowhere near the boiler problems that 1 and 2 do, therefore I believe those to be two viable units to run. That concerns me very much.

1820

The question I've got written here rings loud in my mind. With an expenditure of that type, as has been stated time and time again, it seems to be more of a management problem than a machinery problem. I guess I'm wearing a taxpayer's hat here, saying, "Wait a minute now, \$8 billion; could we not spend a lot less than that dealing with the management problem and maybe take a little bit more of that and fix the machinery problem?"

This leads me into the next thing, with all that's going on, and that is your recommendations and the weight they've carried. I have spoken with one of your members about this. I heard testimony from the OEB and certain other people and I'm hoping that your recommendations carry some weight. As I said before, I trust that your recommendations will be based on these expert witnesses you've received.

The expenditure of \$8 billion bothers me, but it also bothers me in the sense that, and I'm not absolutely positive, this must be costing the taxpayers money as well for the committee travelling all over Ontario and having people speak. I can imagine. I'm interested in knowing what it costs the taxpayer just for this aspect of the IIPA report.

**Interjection:** We're all free.

**Mr Marshall:** You're all free. Okay.

**Mr Conway:** Mrs Johns is a deal.

**Mrs Johns:** Thank you.

**Mr Marshall:** It seems in all the goings-on there's the accountability. That's what I'd be asking a lot of people; Hydro, for example: Where are the supporting documents, the business cases, the impact studies which I mentioned before that don't seem to be there, viable or at least considered alternatives? As I mentioned before with the Pickering A units, two of them could be run. I believe two at Bruce A could be run. Were those considered? Probably not in the case of Bruce A, because the findings of the boilers were just recently found out.

I'm wondering, on the part of government, if they considered any actions as far as a legislative hold, if that's

entirely possible with Ontario Hydro. I wonder if they've given consideration that hopefully my children, growing up, will have the availability of reliable and relatively cheap power compared to an awful lot of areas, although I've heard certain conflicting testimony on that.

It has been stated that there are no experienced persons in this province. I don't know whether that was stated by you or by somebody to you, but I find that at work on a regular basis and that really concerns me. I've got written here, "Canadian personnel have been let go by foreign personnel who are now occupying those jobs." Another one of my concerns is, is it legal? Are they obeying immigration laws? Are we allowing them to set forth with our public utility and are they violating some kind of immigration law? To me, it seems they are.

I'll end this in being a triple-headed person sort of thing: Will the generation — or the little people, so as not to confuse it with electricity generation — enjoy the reliable, environmentally friendly energy sources while looking back in time and saying, "Yes, we made the right choice; yes, we did go with the right decisions"? This should be our motivating factor when taking into consideration all the evidence we gather and act in a responsible manner without influence from political pressures or business aspirations.

That's pretty well my presentation. I thank you very much for your time.

**The Chair:** Thank you. You have exhausted your time. We appreciate your effort and your presentation. We thank you very much for appearing before the select committee. You're excused.

**Mr Laughren:** Mr Chair, I raise a point of privilege. I wanted to wait until all the deputants were finished. I speak perhaps for the committee, not just for myself as a member. It has to do with the white paper.

The white paper is being released tomorrow morning, I think around 11, and there's a pre-release briefing at 9:30, I think it is. I find it very strange that this committee has been excluded from that process. There's a gentleman in the room, Mr Martin — he's given me permission to use his name — who was invited to that pre-release briefing tomorrow morning, and here we are as a committee that has been dying for the release of that report so we could do a better job, it seems to me, and we're excluded from the process. I would have thought, and I'm not trying to say we're that special, the minister would have timed the release of the report — I'm serious — so we could have been part of the pre-release briefing.

As it is now, and I'm only one person, early in the morning I'm heading north, I've got all sorts of commitments in my constituency tomorrow, and I am really offended by the rather cavalier way in which this committee — not just me; I'm not speaking for myself here — has been treated, given how hard we've worked. We have worked hard and we've really been anxious, in a very responsible way, to get the white paper. We've pushed, we've pushed, we've pushed, but we haven't engaged in any histrionics and so forth. I just think the message

somehow needs to get to the minister that this is — I'm speaking for one member, but I think it's unacceptable.

**Mr Conway:** I just want to concur with Mr Laughren's remarks. Speaking for myself, I will have to beg off the morning session at Darlington because I intend to be at the briefing at Queen's Park in the morning. I'm hoping I can join the committee in progress at Darlington some time late morning or at noonhour. Brother Kwinter has volunteered to carry on for our side at the regularly scheduled events tomorrow at Darlington.

It does seem, even to those of us who have served in government, that this is bad form. It may be inadvertent, but many of us have been calling for the release of the white paper and some accommodation for a committee that is going to be very much affected by its content. For whatever reason, a lot of people have been accommodated and we haven't, and I regret that.

**Mr Galt:** I appreciate the comments that have been made by the opposition and the third party. Both are energy critics and I have to agree that we should be present for the release of the white paper, the opportunity to be in the lockup and get that information first hand.

I've discussed it with caucus members and we're more than willing to postpone the visit to Darlington, if that is in order with the opposition members and third party, and we can get another day to go to Darlington. I hope that doesn't mess up plans at Darlington too much, but with the decision we're hearing today, that the white paper is coming out — at least that's the message we're getting, that it's coming tomorrow — maybe this committee should postpone that particular scheduled item for I guess it would be approximately two weeks. Then we're into the House sitting. I guess we'll have to look at another time, Mr Chair. I don't have a suggestion right now.

Having said that, I think it's important that we not bypass Darlington. It's in Mr O'Toole's riding. I think we owe it to Ontario Hydro, to the minister, the whole works, that we need to tour that facility as well.

**Mr O'Toole:** On a point of order, Mr Chair, if I may.

**The Chair:** I'm dealing with a point of privilege right now, Mr O'Toole. If you want to speak to the point of privilege that has been raised, I'm happy to entertain your comment.

1830

**Mr O'Toole:** On the point of privilege, Mr Chair: I respect the comments made by all parties. What's remarkable to me is that there has been a unanimous effort by this committee representing various perspectives, and in that respect I feel pretty much the same thing. It's unfortunate scheduling and those things, so I think Mr Galt has made the appropriate recommendation, which I would support fully. It's the tone I hear from all the members, because we are a part of a very important deliberation, and this part has been a requested part and it's only appropriate that we get a full briefing.

**The Chair:** Mr Laughren, it is not a point of privilege, but I do understand, and I don't say that even with a smile on my face. I say that most sincerely, because I do understand the issue you raise and I believe you to know that I

would share the concern you express. In the parliamentary sense it is not a point of privilege.

I think the suggestion that has been posed, if it's agreeable to members of the committee, having just heard that the white paper will be made available, and we've only just heard about it in the matter of the last hour or two, is that it would be appropriate, if it is with the unanimous consent of the committee, that we stand down the visit to Darlington tomorrow. I would require unanimous consent by the caucuses to agree to that and reschedule that visit. We would then have a chance to be part of the briefings.

I would like to register, on behalf of the committee, the concern that has continued to be expressed — I want to point out it's been expressed not just by the opposition caucuses, it's been raised by everyone — about the timing of the white paper. I think all members of the caucuses have been pressing for this and, in some cases, in fairness, I have heard it mentioned that the white paper might well have been introduced even two or three weeks later, so at least in this sense there's still an opportunity for this committee to deal with it. We have an opportunity to reflect upon that as a committee, to take it unto ourselves and determine what we do with it in terms of that December 1 deadline. That's up to us to decide.

I, on the one hand, regret the fact that it's caught us in midstream; on the other hand, I at least am pleased it's here and we can now deal with it. There is time still to deal with it and we should deal with it effectively. It does mean making some quick adjustments to our schedule. There will be some costs incurred with that. We have things such as the transportation facilities for tomorrow and the arrangements with the plant management and AECB that are not modest, but they are certainly not the kinds of costs that can't be incurred. If I have unanimous agreement from the caucuses, then I will proceed in that direction.

Mr Laughren, it's not only a ruling on your point of privilege but also it is to give my personal sympathy to the thrust of your point and to see if there is a way for us, as we have been doing for some weeks now, finding a common consensus among ourselves of how to proceed. That's a far better way I think to run a committee than it is by running always by the rule books.

Let me pause with that and ask, is there a sense among the caucuses that that would be an appropriate way to proceed tomorrow?

**Mr Conway:** It's agreeable to us.

**The Chair:** Mr Laughren?

**Mr Laughren:** Yes.

**The Chair:** Thank you. I need to hear that for Hansard, that's all, sir. For the government caucus?

**Mr Galt:** Agreed.

**The Chair:** Then I will take it that the visit to Darlington tomorrow will be rescheduled. If you will leave that with me and with the clerk to try to find a way to deal with that as quickly as possible, we'll deal with that without going through subcommittee. We'll try to make that happen at an appropriate time.



I would think that in the light of the white paper it would be appropriate for the subcommittee to at least be on the alert that I would intend to call us together to discuss the process of dealing with it and how we might want to process that. I don't have a time or a place in mind at this moment, rather just to alert you that this is what I propose to do if that's agreeable.

I have a couple of other items to go over before you leave.

**Mr Kwinter:** Mr Chair, further on your point: Could you tell us where and when this lockup is taking place?

**The Chair:** Mr Kwinter, I suspect you know considerably more than I. I have no idea, but I would think that Mr Galt will be able to let us know.

**Mr Galt:** Tomorrow morning.

**Mr Laughren:** Do you know where it is?

**Mr Martin:** I gave my copy to the reporter.

**The Chair:** You have a copy of what?

**Mr Martin:** It's an invitation from the minister.

**The Chair:** Oh, all right, that's fine. If it had been the white paper, I would have gone extremely ballistic, let me tell you. You've never seen an Irish ICBM before. That would have been the first one. Have you got the information there? Perhaps Mr Laughren would be good enough to read it out.

**Mr Laughren:** This is for Mr Martin. We may not be welcome. "The briefing will take place on Thursday, November 6 at 9:30 am in the Thames Room, Macdonald Block, second floor."

**The Chair:** I think that's probably a place to start. If there is any additional information prior to that, Mr Laughren, I'll ask the clerk to try to determine it and make sure all members are notified no later than 3 am.

**Mr Conway:** By the way, if there ever was a case of privilege, this is it, but that's another subject. I'm deadly serious.

**The Chair:** But it is not, Mr Conway, for another reason. But having said that, I think I have dealt with it in a way that's to the satisfaction of all members of the committee.

Now can I finish off a couple of other points here before we leave? Let me make sure we're very clear about this. First of all I wanted to thank, obviously, St George's Memorial (Anglican) Church for hosting us. Clearly now we can scrap the announcement about tomorrow's activities, because we are now meeting somewhere else.

I want to say that we are wishing our best to Mrs Johns. It is Mrs Johns's anniversary today, so we'll wish her well. She has continued along through these difficult waters today, barely waiting for the evening to blossom forth and for her to go out and celebrate with her husband.

Is there any other business before the committee? There is one final point about the week of the 17th. We talked about this the other day. In terms of scheduling, clearly we need to have a block of time for that week. We worked it through similar to what we discussed in committee at the last meeting: Monday, 3:30 to 6 and 7 to 9; Tuesday, 3:30 to 6; Wednesday, 10 to 12 and 3:30 to 6; Thursday, 10 to 12 and 3:30 to 6. The House leaders will all be advised of their agreement that the members of this committee will be available.

**Mr Laughren:** Sorry, what was the Wednesday schedule?

**The Chair:** Wednesday is 10 to 12 and 3:30 to 6.

**Mr Laughren:** Well, there is conflict with at least one committee that I'm aware of.

**The Chair:** I'm sure there's a conflict with more than one committee. Unless there's a problem, all the House leaders had given an undertaking that for this select committee members would be subbed so they could continue with their responsibilities.

If anybody wants to make a suggestion — for example, altering this time — I'm open to your suggestion now, but I'd like to get it locked in, before we go, for the week of —

**Mr Galt:** Go through it again just so I can click in.

**The Chair:** All right. Monday, 3:30 to 6 and 7 to 9; Tuesday, 3:30 to 6; Wednesday, 10 to 12 and 3:30 to 6; Thursday, 10 to 12 and 3:30 to 6.

**Mr Laughren:** Could that be contingent, that this schedule will be in effect only if we're not debating back-to-work legislation for the teachers?

**Mr Conway:** That's provocation, Mr Chair.

**The Chair:** I didn't rise to yours, Mr Conway, and I won't rise to Mr Laughren's.

If that's agreeable, we will use this, assuming each one is at the call of the Chair and any other calls necessary. I appreciate your generosity of spirit for the day. It has been a long day and we're now prepared to adjourn. Any other business? No. Then the committee will stand adjourned until the call of the Chair or if the subcommittee meets or on Monday the 17th.

*The committee adjourned at 1840.*





## CONTENTS

Wednesday 5 November 1997

Town of Pickering .....	H-523
Mr Wayne Arthurs .....	
Nuclear Awareness Project .....	H-528
Mr Dave Martin .....	
Mrs Sally McLeod .....	H-531
Mr Joe Pacione .....	H-532
Ms Suzanne Elston .....	H-534
Mrs Karen Paul .....	H-535
Canadian Nuclear Workers' Council .....	H-536
Mr David Shier .....	
Mr Maurice Brenner .....	H-539
Mr John Wells .....	H-541
Mrs Dawn Roper .....	H-542
Ms Sherry Senis .....	H-543
Mr Kevin Ashe .....	H-545
Clarington Hydro Electric Commission .....	H-546
Mr George Van Dyk .....	
Mr Dave Clark .....	
Ms Pauline Storks .....	
Ontario Hydro employees .....	H-549
Mr Peter Falconer .....	
Mr Bob Peters .....	
Mr Dave Milton .....	
Mr Frank Adamek .....	H-553
Mr Rick Marshall .....	H-555

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**Select committee on  
Ontario Hydro nuclear affairs**

**Comité spécial des affaires  
nucléaires d'Ontario Hydro**



Chair: Derwyn Shea  
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## LEGISLATIVE ASSEMBLY OF ONTARIO

## ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

SELECT COMMITTEE ON  
ONTARIO HYDRO NUCLEAR AFFAIRSCOMITÉ SPÉCIAL DES AFFAIRES  
NUCLÉAIRES D'ONTARIO HYDRO

Tuesday 18 November 1997

Mardi 18 novembre 1997

*The committee met at 1608 in room 151.*

**The Chair (Mr Derwyn Shea):** We are prepared to proceed this afternoon with a number of items. The witness before us today is John Ahearne, the past chair of the US Nuclear Regulatory Commission. Welcome to the select committee. I'm so pleased you could accept our invitation.

Just before we begin, I mention to the members of the select committee that what we'll do is deal with the testimony of our witness and then, at the conclusion of that, we will go into an in camera session to deal with some business affairs, not the least of which will be perhaps some reordering of any of the business of this committee for the next week. As we know, we are almost at the tail end of the hearings and are about to give our attention forcefully and promptly to the writing of our report, and hopefully we should have that done within the next week to 10 days or two weeks at the outside, as we've agreed, and so we'll proceed in that direction. But we'll come back to that in a few minutes.

JOHN AHEARNE

**The Chair:** In the meantime we will begin by welcoming John Ahearne. For the purpose of Hansard, perhaps you'd be good enough to simply identify yourself and then we are in your hands. We'd like you to make whatever opening comments you'd care to make. We welcome you.

**Mr John Ahearne:** I am John Ahearne. In the past I have been chairman of the United States Nuclear Regulatory Commission. As I made clear to your counsel, Mr Chamberlain, my detailed knowledge of the Canadian situation is 10 years old and I did not want to mislead you into believing I'm a current expert on that. I have not kept up with Ontario Hydro, nor with the AECB. My knowledge of the shutdown only comes from the trade press and the material Mr Chamberlain sent me. However, I do have a couple of comments.

First, in this report where the list of minimally acceptable items are categorized for the Ontario Hydro plants and Ontario Hydro, the report mentions minimally acceptable as safe, but with so many things minimally acceptable, if this is accurate, then they should have been shut down to regroup.

There are separate questions when you address nuclear operations. The first is the question of design. Let me

point out that a major question we in the nuclear community have been having with designs of Russian reactors has been that the designs are unsafe in many cases. The Chernobyl reactor is a classic example. The Candu design, as far as I know from every study I've seen, is a solid, robust design. Like all designs, there are some problems that are maybe unique. In some of the early Candus, because of the material used in the pressure tubes, there were problems, but those are resolvable problems.

The second issue is operators. The critical question clearly is whether the operators are well trained and understand what they're doing. In the United States, the major accident at Three Mile Island occurred because the operators did not understand what they were doing.

The review appears to say that the operator training is quite good. I've one slight question, a slight puzzle because in part of the review it mentioned that Ontario Hydro staff at every level are reluctant to ask difficult questions of themselves and others, and fail to establish a questioning attitude. Operators have to have that questioning attitude, so it's not clear exactly how well trained they are if that isn't there.

The third element after the design and the operators is management. From what I've read, there was really a breakdown in management. In running nuclear power plants, one has to recognize that it's not only management at the top, but experience at least in the United States has been that the plant manager, the actual person at the plant who has the full management responsibility is the most critical person, and with this large list of minimally acceptable items it appears at least at first blush that those people had fallen down on their jobs.

The final issue is the regulatory side. From the material I was sent and the material I've read in the trade press, the regulatory side was invisible. The United States is not immune to these problems. Millstone is a more recent classic example, and since Mr Chamberlain said you were interested in perhaps the current relationship or current process in the United States, I thought I would read you a few extracts from some recent views, and this is this year, done by our General Accounting Office of the Nuclear Regulatory Commission.

"Part of the problem is that the NRC does not precisely define safety, and thus has difficulty measuring the safety conditions of the plants it is required to regulate. Instead, the NRC presumes that plants are safe if they operate



within their approved designs and in accordance with NRC's regulations. NRC allows the licensees repeated opportunities to correct their safety problems, often waiting for a significant problem or series of events to occur at a plant before taking tough enforcement action."

The NRC's inspector general reviewed the problems at the Millstone plants, and I mention Millstone plants because they seem to be characteristic of the similar kinds of problems found in Ontario Hydro. The NRC's inspector general found: "Millstone's change in program initiatives and management reorganization lulled the NRC staff into allowing an excessive amount of time for proposed corrective action to take effect. The Millstone sporadic improvements neutralized the NRC staff willingness to take prompt action."

As an example, there was a leak in a valve. The workers tried 30 times to fix the leak over 74 days. Finally, they broke the valve and the plant had to be shut down to fix it. The NRC's senior resident inspector recommended a shutdown early on when he saw all these problems. He was overruled by regional management who believed there wasn't a regulatory basis for shutting down the plant.

An independent audit by the state of Connecticut, in which the plants are located, concluded, "Concerned about the need to trim costs in the face of future competition, the managers chose to manage close to the regulatory margin. This decision translated into deferring maintenance, allowing corrective action backlogs to grow, eventually creating a situation that led to a shutdown."

The review of the plant by a consultant last year said:

"NRC advised the licensee had seen limited success in resolving significant performance concerns about procedural adherence, work control and tagging, ineffective communications and teamwork between organizations, continued weaknesses in correcting identified problems, poor self-assessment and quality verification and inappropriate response to employee safety concerns.

"The review revealed weaknesses in the ability to identify the units' problems, delayed or inadequate corrective actions for known deficiencies, problems in tracking corrective actions etc."

Why then didn't the NRC do anything if all of these problems existed? The consultant said that the licensee's nuclear organization had been mismanaged for the past 10 years, but it concluded the NRC had been too permissive and trusting in its dealings with the licensee.

In the United States, when I wrote a report 10 years ago comparing the Canadian system of regulation and the US system, the US system had been very prescriptive. Over the intervening years, the NRC tried to relax and give licensees more flexibility, more opportunity to solve the problems themselves, and as evidenced in this case of these reactors in Connecticut, the licensee in that case deliberately, it appears, allowed many things to go unfixed, tried to get away with deferred maintenance, didn't pay any attention to people within the system who were trying to raise objections.

The result when the final reviews came in was that in addition to those three plants being shut down — they've been shut down now for a year and a half and when they will get started keeps slipping — there were a number of NRC people who were removed from their positions and, as a result, the NRC has now gone back to a very prescriptive, by-the-regulations approach because they were really badly burned. There had been a movement to go to what they call performance-based, risk-based regulation. That clearly is on hold at the moment.

When I wrote an article eight years ago comparing Canada and United States, I described Canada as, "We are a family; let's sit down and talk this out," and contrasted it to the United States, "I'll see you in court." The family may have retired. They may have got too old and they may have broken up. Complacency may well have set in. The Canadian-run Candus were recognized around the world as having some of the best operating performances. But in reading these reviews, it really seemed to come home that a number of the weaknesses I had seen in the past in the regulatory system were certainly there; that is, there did not seem to be any kind of strong oversight.

Since the province owns Ontario Hydro, there's no reason why the province can't have its own nuclear oversight committee. At the time I did the reviews, Ontario Hydro did not have such a committee and I don't know if they have one now; if they did, where was it? I also am not sure what happened to the AECB on site staff because they had, at least when I reviewed it, a lot more authority than NRC on site staff, and it's not clear to me how these growing problems could have existed for this long, except in the United States 10 years of Millstone had occurred.

Those are my opening comments. I'll be glad to try and answer any questions you might have.

1620

**Mrs Helen Johns (Huron):** This is my old age coming in. I just missed the last five words, "Except the NRC had 10 years of" —

**Mr Ahearne:** Problems at Millstone. My point was that it's not clear why the AECB residents did not catch these problems, but then I pointed out in the United States the NRC's people apparently didn't catch them either.

**The Chair:** With that confession of your age, Ms Johns, we will thank you, Dr Ahearne, very much for your opening comments. What I'll do is the process here is to move by caucus in rotation, as you know, and we'll do five minutes per round to keep going around to allow as many members as possible to have a chance to ask you questions and to receive your answers. I'll begin with Mr Laughren.

**Mr Floyd Laughren (Nickel Belt):** Mr Ahearne, welcome to the committee. I'm wondering if you have any experience about what happens to plants when they're shut down for a period of time and then reopened. Do you have any experience in that?

**Mr Ahearne:** Yes. In fact I'm on the nuclear oversight committee for two reactors in the United States which were shut down for a little over a year and one of them was

now just come up. A lot depends on whether one can change the attitude of the people running and managing the plant, because these kinds of problems that were listed here are functions of attitude. If you can change the attitude and then begin to make corrective actions, you have a good chance of getting back on the right path.

But one should never expect a plant that has been down for six months to a year to start up easily. The experience we've had in the United States is that there are problems that show up as soon as they start. They usually will be started for about a week, some problems will show up and they're shut down. It may take a month to fix those problems and start up again. There's a fit and start. It's like shaking down a new, large piece of complicated equipment and it may take six months before it can get running effectively.

**Mr Laughren:** What if it was shut down for two, three, four or five years?

**Mr Ahearne:** I think two years is about the limit in the experience we've had in the United States and effectively started a plant up again. Once you go beyond that, there really is a question of are you able to keep all the equipment in good shape. Three Mile Island was shut down for about that length of time and they had a lot of problems when they restarted it.

**Mr Laughren:** Is it technical? Is it the equipment that's the problem at that point?

**Mr Ahearne:** Yes.

**Mr Laughren:** Even though you do maintenance during that —

**Mr Ahearne:** Well, you do maintenance, but a reactor in some ways is like a large chemical plant. The equipment is made to be running and to have flow through all of the system. When you stop all the flow in the system and you stop running the equipment, then fields can dry out, you can get crud forming in some of the pipes, that kind of problem.

**Mr Laughren:** We're always worried about the crud.

**Mrs Barbara Fisher (Bruce):** Welcome. I'd like to start by asking you as a member of the regulatory authority in the US, how many refurbishings and retrofits were you involved in as a member of that board; on the retrofit and the refurbishing ones as opposed to the brand-new, spanking-new, up and coming —

**Mr Ahearne:** In the United States there is no reactor built that was ordered after 1974. I was made chairman right after the Three Mile Island accident, so most of my time on the commission was spent trying to figure out what went wrong in a major accident, where were the weaknesses in the operating practice of the utilities, where were the weaknesses and the oversight problems of the Nuclear Regulatory Commission, and then what changes would have to be made in reactors to allow them either to continue to run or what changes ought to be made to allow the small class of reactors that were like the TMI reactor to run.

**Mrs Fisher:** As you know, Mr Andognini is overseeing the restructuring and refurbishing of the nuclear units in Ontario now. I don't think I should speak for

everybody here, but I can speak for myself and our community. We have certainly been impressed with the work he's provided in terms of what is necessary and in some cases what the handicaps to recovery might be in terms of timeliness.

I will ask you, in your American experience, are they all one-reactor sites or are they multiple-reactor sites?

**Mr Ahearne:** Most sites in the United States are either single or double reactors. We only have one site that has three reactors. We have no sites like yours with four and eight reactors.

**Mrs Fisher:** In your experience, have you overseen anybody undertaking the refurbishing of so many reactors at once, under one body, if you will?

I'll give you an example. We have 20 units — I'm sure you know that — and one is more permanently laid up than the rest but I don't think it's written off the chart yet. So let's say we have 19 and we're looking at refurbishing 12. There's a 12-16-20 program that people are talking about. To get there we're looking at putting seven units in a layup state and refurbishing 12 to the utmost excellence. I'm wondering right now, given what you just said, is it possible that one person or one unit or one body could be responsible for so much?

**Mr Ahearne:** I don't mean to be facetious but most governments in the world, even those that are very large, end up having one person at the top. So the fact that you have only one person at the top of something is not that distressing. It's not upsetting. It depends upon the quality of the people who are working for the man or woman at the top and how clearly identified are the steps that have to be taken. For a large group of people to accomplish a lot, there has to be a fairly well laid out plan of what they're going to do.

**Mrs Fisher:** In the US model, then, just to do a comparison here to make sure my comfort level is where it is anyway, if you were to critique the need for repair, would it be system wear-down or would it be a human resource problem in terms of the highest need of point of recovery?

I'll pre-empt that by saying why I'm asking that question. In reading the IIPA, I'm sure you've recognized that the human resource problem is being tagged as the major problem, and the management decision-making and the ability to manage that many people, that type of thing. It almost appears like money could be secondary, especially if you look at the opportunity of having private-public partnerships.

Although we had one head of this undertaking, would it be possible to consider that if we had other human resources — and I might cite rehires from Hydro layoffs that we think strategically were done improperly in the past, or British-experience workers who right now are on layoffs because they finished their refurbishing and they have apparently an abundance of somewhere around 200 of these people, or even some American staff. I like to buy in Canada first, but if we have to shop outside there's nothing wrong with that in terms of support. Could one person manage if we had the right, appropriate bodies in



place for full recovery? It scares me when you say that if you lay them up for a period of time, the bringing up of the units again is a problem. I happen to agree with you, by the way. It bothers me a little bit, though, if we think we can do it any differently than anywhere else. If we were able to manage that and have those bodies there, could you see it being done?

**Mr Ahearne:** Yes. It all depends, as I said earlier, on the quality of the people. In reading the material, it seems to me that a lot of it was management and attitude-related problems. That means those are people problems and to fix those you need good, qualified people. You need people who can get across what it is to run things correctly, what it is to have sound maintenance, what it is to have a questioning attitude, what it is to make sure that things are accomplished in order when they have to be accomplished.

1630

**Mr Sean G. Conway (Renfrew North):** Mr Ahearne, thank you for joining us today. I just want to ask a couple of questions. Shortly after you did your work for Dr Hare here in Ontario in 1986, our federal regulator, the Atomic Energy Control Board, began, we now discover — and the committee has had some very interesting documentation provided by AECB. From about 1987 onwards, it's very clear from the documentation provided by the Canadian regulator of nuclear reactors that there was an ongoing decline in the operating standards and safety attitudes around many of our plants here in Ontario. I think all of us on the committee were struck by how, after a few years, like some of the examples you cited from your American experience, notwithstanding pretty vivid and repeated testimony and concern and complaint from the regulator and a lot of good intentions from the licensee, nothing much changed.

With that as a backdrop, what I want to ask you is, on the basis of your experience in the United States — I'm thinking now of the management culture, because Andognini and his group here in Ontario have said "a really serious management cultural problem." What are the ingredients of success in turning bad nuclear management cultures into better or much improved nuclear management cultures?

**Mr Ahearne:** The experience with that has happened in the United States. You need a set of people who understand what it takes to run nuclear plants efficiently and safely: a great attention to detail, an understanding of what is important and what is secondary, and a willingness to identify who is not accepting those strictures and following them and an ability to get rid of them.

**Mr Conway:** The impression one gets in Canada, and certainly in Ontario, thinking now about Ontario Hydro, is that this was a very successful construction and design company; did wonderful works, produced a robust technology, got it up and running, and then kind of either lost interest in the discipline that comes with the operation or never really developed the different interest that is required to move from design and construction to ongoing operation. Thinking now about some of the uniqueness of

the Ontario operation — two or three sites with a large cluster of large reactors, and apparently, accordingly to Andognini, not a strong operational ethic in this utility — what should this committee be thinking about and be recommending in terms of your experience in helping build a much stronger operational ethic around safety and related matters?

**Mr Ahearne:** A couple of comments. First, I didn't like the possible implication that after Ken Hare and I did our report, safety declined.

**Mr Conway:** I don't think that there's any conjunction other than —

**Mr Ahearne:** I'm not sure what the committee can do so much as ensuring that there are the right people running the system. You're right in the sense that it takes a large commitment to disciplined operation, which is quite different from designing a reactor and is quite different from building the reactor, which takes dedication etc, but running the reactors requires a disciplined system.

In the United States it actually ended up taking the Three Mile Island accident to shake up the whole system, to make them recognize that they had allowed that discipline to disappear. Certainly you've had a big enough shake-up, but now you have to try to make sure you're putting in place the kinds of people who understand how to bring the discipline, how to bring the focused attention, how to ensure that the operation now reaches the level of importance that — utilities in the United States had tended to view nuclear power plants as easy to run, co-plants easy to run and nuclear power plants as just another way of generating electricity. It's different. It's a much more demanding technology.

**Mr Laughren:** When the national or federal regulatory agency came before this committee, they said on several different occasions — my colleagues will correct if I heard it wrong — that their job was to regulate the industry but not to run the plants, which is understandable, even if they have people in the plants at all times.

What occurred to me when they were talking like that, I couldn't help but wonder to what extent any regulatory agency can micro-regulate the nuclear industry. It seemed to me it was getting away from the federal regulator; the behaviour or the way in which they were being run was getting away from them. I don't know why, because we saw pictures of the plants and the terrible conditions in some parts of the plants and so forth. A lot of it was maintenance stuff, but as you indicated, you've got to really pay attention to detail because what may appear to be a maintenance problem can be bigger than that. I'm wondering if you have any thoughts on that. To what extent can the federal regulator police these large nuclear plants sufficiently?

**Mr Ahearne:** Let me give you more from my perspective in the US. That's the same point the NRC has made regularly. The NRC's responsibility is not to run the plants, it's the utility's responsibility to run the plant and the NRC's responsibility to make sure those plants are run safely. The regulator's responsibility is to understand what safety requires, and when the plant begins to get into a

condition such that safety can be challenged, then to raise that issue strongly with the utility management, and if changes aren't made, at least in my country, to shut the plant down.

The regulator cannot get involved, at least that's my sense, in trying to run the plant. They don't have the responsibility, they don't have the people, and in most cases they really don't have the knowledge.

**Mr Laughren:** You made reference to a nuclear oversight committee. Ontario Hydro set up at the board level a nuclear oversight committee but — and these are my words, not anybody else's — at the end of the day they threw up their hands and called in Carl Andognini and said, "Tell us what the hell is going on." I'm wondering whether it's possible for a large organization to police itself on something like that.

**Mr Ahearne:** The only thing a large organization's nuclear oversight committee can do is to raise those questions such that the management then takes action. From what you said, I don't know whether the call to bring in the outside person was the result of the oversight committee's dismay at the conditions. If so, then that was the correct action.

**Mr John O'Toole (Durham East):** Thank you very much for your presentation. I'll start off with a very light-hearted question. Looking at your profile here, "...Research Society, and is an adjunct scholar with Resources for the Future," perhaps you could tell us, what are the outlooks for the resources of the future? Is nuclear the option or is it natural gas? It's not meant as seriously as it sounds.

**Mr Ahearne:** I'm on the energy R&D study for our president and I chair the nuclear portion of that. We have just produced a report for Clinton pointing out that if one is going to make serious reductions in greenhouse gas emissions, at least in the United States and much of the world, nuclear has to be kept as an option.

**Mr O'Toole:** A good answer. That's kind of what I expected. I would like to focus on a few things here. In your position during the period 1978-81, did you ever exercise the right to close down an operational facility?

**Mr Ahearne:** We closed down a number right after Three Mile Island.

**Mr O'Toole:** You were the regulator and you actually closed. You took the key out of the switch and said, "That's it."

**Mr Ahearne:** That's right.

**Mr O'Toole:** That's the role the AECB would have. Is that the analogy you drew with your report, that there was somewhat of a parallel regulatory authority?

**Mr Ahearne:** I couldn't find that the AECB at that time really seriously thought it had that kind of authority.

**Mr O'Toole:** That's what we found as well. I would ask you also, are you familiar with the members or have you ever worked with members of the Andognini team?

**Mr Ahearne:** Since the team had 75 people and I don't know who they are, I can't tell you.

1640

**Mr O'Toole:** How about the top five or six? We've met with the top people. You've probably reviewed some of the materials or may even have spoken — have you spoken to any of those people in the last while?

**Mr Ahearne:** You'll have to tell me who they are.

**Mr O'Toole:** Carl Andognini was the main presenter here, but there was another fellow, the nuclear operations guy. We'll get that for you. I really was trying to get to a question of their credentials and do we indeed have the experts of the world.

**Mr Ahearne:** All I can say is that in the US nuclear trade press they describe the team as highly qualified.

**Mr O'Toole:** We've been told that they're the turnaround management team. I guess that's an overarching expectation.

**Mr Ahearne:** There are a number of groups who have described themselves as that. The energy people who went to Maine Yankee said they were. The people who have been hired to put Millstone back on track say they are. There are a number of people who have the credentials that they've managed to take problem plants and get them back up and running well.

**Mr O'Toole:** Very good. I appreciate that. I've just got a couple of more points. I really wanted to emphasize: You listed really three particular aspects of design, operation and management. Just looking at the management aspect, we are talking about the turnaround team. The current chairman of the board and a few others, perhaps Maurice Strong and others, talked of the kind of decay within the management structure, using different terms. Some referred to it as a cultural malaise. Would you think, having the experience you have, that there is in the technology in itself, in this very highly specialized knowledge, a cultural phenomenon in the management team?

**Mr Ahearne:** Sir, I don't really understand your question.

**Mr O'Toole:** Are there common characteristics that could be described as cultural characteristics among the managers of nuclear facilities?

**Mr Ahearne:** I can't say that from my experience across a large number of them. No, I haven't. The only thing that I think distinguishes them is a belief that nuclear power is good. Beyond that, some are extremely highly technically qualified; others are on a management operational side and just have a basic understanding of nuclear power; some are highly disciplined, authoritarian and some tend to take a more relaxed attitude.

**Mr O'Toole:** Good. We don't get that much time each round, so it may be my only real opportunity and I thank you for your candour. The most important observation, you mean, in this management approach to problem resolution is what you've called or defined as a questioning attitude. How does that translate into top-down decision-making? Is the operator, for instance, the kind of middle manager at the front of the computer console, the person who should have the right and responsibility to flip the switch or whatever is necessary?



**Mr Ahearne:** That's an issue that has been debated heavily within both the operating and regulatory systems: When should someone have the authority to shut a plant down? An operator should have that authority when he or she sees the plant getting into a regime that they know could be unsafe. That's very near-term. On the longer-term basis, practices are beginning to erode. At that stage it's a plant manager who should have the authority, but the questioning attitude is that anyone in the plant should be able to raise that as an issue. It should not be squelched if they do.

**Mr O'Toole:** I'm just going to repeat one of the recommendations. I have a summary of the recommendations of your report, and I'm referring specifically to recommendation number 12, and this is dealing with regulations. Briefly, it says to enforce this mandate, "the licensing of the staff qualifications process are sufficient for its purposes, provided that they are fully and promptly used. Periodic requalification of operator staff should be considered." Does that, to your knowledge, occur today, where they could be moved off-site if they failed one of their operators —

**Mr Ahearne:** I don't know, in your system. In my system, yes, they have to requalify, and if they don't pass the requalifying examination, they are not allowed to be on-site.

**Mr Monte Kwinter (Wilson Heights):** Mr Ahearne, I apologize because I don't know exactly which of the recommendations you made to the Hare commission were accepted and which weren't, but I do know that in the recommendations of the Hare commission they talk about the role of the Environmental Assessment Act and that it should have had greater input into the design of the new system; and also, to quote, "While there are no new nuclear projects on the horizon in Ontario, significant changes to the current system may warrant such public hearings."

A week ago yesterday we had municipal elections. One of the questions on the ballot in Pickering was whether or not there should be an environmental assessment before any of these reactors are fired up again. That got overwhelming support from the electorate. My question to you is, and again I apologize about whether or not you had a part in that recommendation: In your experience, is there a practical application of environmental assessment on an existing facility as opposed to looking at a facility that is a greenfield one?

**Mr Ahearne:** At least in the United States, for any major federal action you need an environmental assessment. Restarting a reactor that has been down for a while certainly should have public participation. That's my own personal view. My experience in a whole host of activities in the United States is that in a democracy you need to have the people who are going to be most directly affected to have a chance to understand what is happening and get their advice.

Various systems have different ways of making decisions, who is fundamentally responsible. I'm not sufficiently familiar with what an environmental assessment is in

the Canadian system. In the United States system, an environmental impact statement can take two or three years to prepare, and in most cases for the restart of a reactor that would not be necessary. But for the restart of a reactor, there usually would be required an opportunity for the public to comment on whether that should be done.

**Mr Kwinter:** Thank you. The other thing I'd like to really get your views on is, when you read the NRC report on Millstone, you could have just transferred Ontario Nuclear to the name of Millstone and got exactly the same responses. One of the findings of the Andognini report is that there was a failure of management to communicate, there was poor maintenance, all the same things that happened at Millstone. My question is, is this indicative of a situation that cannot be controlled? It seems to be too much of a coincidence that two disparate facilities, not owned by the same organization, have exactly the same problems. Is this endemic to the nuclear industry? Is this something that is just coincidental? What is the story behind it?

**Mr Ahearne:** It's not endemic to the nuclear industry. We have 104 other reactors and at least in the reviews I have seen, both the industry reviews and public reviews, do not indicate that those kinds of problems afflict the other reactors, so I don't think it's endemic to the industry. It's always a potential. That's what I've tried to stress many times. There is a real difference in trying to run nuclear operations from running fossil operations. Running nuclear operations just requires much greater constant attention to detail. It is easy to forget that and at time utilities have slipped away from that. Then they get into the kinds of troubles that Millstone got into and apparently Hydro got into.

1650

**Mr Kwinter:** Are there nuclear facilities in the United States that are sort of the model, that have started from day one and have operated efficiently and safely without any of these problems?

**Mr Ahearne:** The Duke facilities are pretty much a classic model. Duke Power has, I think, seven reactors. They are all about the same size as your reactors. They built their own. They had their own construction teams. They have run their reactors very efficiently, very well, by constant great attention to detail. On the other hand TVA, which in many is analogous to Hydro — it's a public corporation and has about 34,000 employees — made a miserable job of its nuclear operations.

**Mr Laughren:** Have there been new — I probably should know this, but I don't — nuclear plants built in the US in the last few years?

**Mr Ahearne:** The 1974 order was the last plant that was ordered and actually built. There was a plant completed last year but that took 22 years to build.

**Mr Laughren:** Which one was that?

**Mr Ahearne:** That was Watts Bar, the last TVA plant.

**Mr Laughren:** The reason I asked that question is that I get the impression from all sorts of people that the nuclear age is gone — this is my spin on it — because they are too expensive to build. We here built Darlington,

eight units, which was supposed to cost \$4 billion and ended up costing \$14 billion, and that's reflected in our rates.

**Mr Doug Galt (Northumberland):** Only four units.

**Mr Laughren:** Sorry. Four large units, yes. Anyway, they ended up with this huge overrun.

I don't know whether it's just my thinking or whether there's some legitimacy to it, that given the potential cogens, natural gas, turbines and so forth the nuclear age is gone. I don't know that. Is that your sense? You say that nuclear will have to be an option, but if the costs are not reasonable, how can it be?

**Mr Ahearne:** Combined-cycle gas beats nuclear, hands down, on cost. Construction costs are enormous on nuclear plants if they take eight, 10, 12 years to build. The largest plants, 1,200, 1,300 megawatts, advance reactors that have been built in Japan in the last couple of years, the same kinds of design that are built in the United States, took a little less than five years to build. As I recall, the last Candu that was built overseas took about five years to build. So they can be built in a much shorter period of time.

When that happens, then the capital costs are quite competitive in those areas that don't have much in the way of natural resources. Japan clearly is a good example. In the United States, in the study I just ran we concluded that no one we found thought there was any chance of another nuclear power plant in the United States for at least 20 years.

**Mr Laughren:** But you say that it must remain one of the options.

**Mr Ahearne:** It must remain an option because that's it. If there is a very serious requirement to reduce greenhouse gas emissions, that will require drastic cuts in coal-burning and it actually may end up adding on sufficient cost that gas is not feasible. That's why I say we conclude it has to be an option if it really ties to how serious a requirement is going to be placed to reduce greenhouse gas emissions.

**Mr Laughren:** What is happening in the States now? There must continue to be a demand —

**Mr Ahearne:** At the moment, gas is the option of choice.

**Mr Laughren:** And they're building those.

**Mr Ahearne:** Yes.

**Mr Laughren:** Thank you.

**Mr Galt:** I'm just curious. How well do you know Andognini?

**Mr Ahearne:** I don't.

**Mr Galt:** You don't know him?

**Mr Ahearne:** I do not.

**Mr Galt:** Gee, you spoiled the rest of my questions.

**Mr Ahearne:** I'm sorry.

**The Chair:** Got another question?

**Mr Galt:** I've got a couple of others in a new direction.

**Mr Ahearne:** We have 30,000 people in the United States involved in nuclear.

**Mr Galt:** I thought it was a pretty small club. It seems like it's been called a cult, a nuclear culture in Canada, kind of like a small group, and I thought you'd probably all know each other.

As you were moving along through your presentation, you sort of shivered when you came to this role of "minimally acceptable." I almost had the feeling you didn't quite believe it, that you were really questioning that you could get so many in a row that were minimally acceptable.

**Mr Ahearne:** What struck me was, I looked at the table of all these minimally acceptables and then I read the material that said it's still safe. That led me to puzzle about how safe the plants are if you hit all these minimally acceptable levels. Of course it wasn't clear what criteria they were using, because they mention that industry standards are defined to include not only the nuclear safety aspects but the cost competitiveness. I'm just not clear as to how to interpret "minimally acceptable" on that.

**Mr Galt:** You'd kind of wonder that some things wouldn't have been a little better and some of the others might actually have failed rather than all coming in —

**Mr Ahearne:** I would have expected there to be some in the "satisfactory" category. I was surprised to see nothing in the "satisfactory" category.

**Mr Galt:** In the area of deterioration you talked about the family sort of way we handle things as Canadians and that in the States you'd see them in court, a different sort of approach to handling things. Could that explain why we evolved in the direction we did with this problem we have at Ontario Hydro?

**Mr Ahearne:** There are two pieces to that. First, you took the general approach to regulation, which is the English approach, which tends to provide more of a general framework.

What I found when I went through this review years ago was that everybody really did know each other very well. They had worked together. There was none of the arm's-length attitude I was familiar with in a regulatory environment. The people in the AECB, the people in AECL and the people in Ontario Hydro really did seem to be just one close group. As I saw many times when I'd be discussing with them, they'd say, "If we get a problem, we'll just sit around the table and talk it out." This is a collegiality aspect that is not common, at least in the United States regulatory systems. That's what I was struck by.

When you have that kind of collegiality, it can be very useful when you're moving forward in a new endeavour. As long as everyone keeps a high attention, a high focus on your goals, that can work reasonably well. You can certainly get over problems more quickly. But if after a while complacency were to set in, "Things are running well; let's cut a little cost here; why keep worrying about that?" then this collegiality could break down. I don't know whether that happened.

**Mr Galt:** This may explain why in the IIPA report they're talking about that there should be a more authoritative style of management compared to what we've had. I



really questioned it at the time from some of the other things in that particular report. Do we have the right person in Andognini to straighten this mess out?

**Mr Ahearne:** As I said, I don't know him. He has a good reputation. I certainly would not want to hazard a judgement.

**Mr Galt:** You say "a good reputation." Did some of the projects in the States that he has helped to recover turn out well?

**Mr Ahearne:** The trade press, when he was identified, had identified a number of things he had been involved with and they said he and his team were certainly extremely competent people. That's all I know about it.

1700

**Mr Conway:** To pick up on the earlier points about the regulatory environment, because I think what you say is quite important and quite believable, that the American nuclear community is obviously a much larger one than the Canadian one, I think those of us, and we've been doing some site visits in the of course of this inquiry, were struck — I know I was at the Bruce facility — about just how these onsite people functioned.

To be perfectly frank, it is a very difficult situation in which they find themselves because it's a small environment, much smaller than the US. I kept thinking as I walked around in that plant: "All right, if you wanted to be tougher than they have been, and I think many of us have come, I know I've come to the conclusion that they ought to be tougher, it's not going to be an easy thing. You're going to have to abandon any notion of collegiality because it's just not going to work. You are going to be the SOB who is going to have to be much more willing to call the bluff and say: "It's over. We're going to shut this thing down because you just haven't performed."

Just as a practical matter, it's like people who come to Parliament, to the British parliamentary situation, and often think they want to bring in a kind of boy scout camaraderie and they fail to understand that the system is fundamentally adversarial. You may not like it, but that's the basic informing notion and you get into real trouble if you think you're going to be a boy scout in something that's that adversarial.

What I want to get from you is, given the small size of the family, how might we proceed away from something that's too collegial to something that is going to be more meaningful and necessarily more adversarial?

**Mr Ahearne:** You do it in Parliament. People in the regulatory system have to realize that their job is not to be a buddy, it's to be a regulator. Yes, it is difficult. We have resident instructors in the plants in the United States and some find it very difficult. We have had to remove some of them because they've gotten too friendly with the licensee. They are not there to be the technical onsite adviser; they are there as a representative of a regulatory agency to ensure that regulations are followed.

**Mr Conway:** One of the things you said earlier that really gave me a lot of concern, and I forget what the specific example was — oh, I know. You were talking about how the Americans in the intervening years, from

the mid-1980s through to the mid-1990s, had moved away from prescriptive to more relaxed, and now they're moving back because the more relaxed the regulator became the more the utilities, looking down the road at a deregulated and competitive marketplace, started to operate at the margins. Those are my words, not yours.

**Mr Ahearne:** I think that is what the NRC feared was happening. I don't think that really happened. As I said, Millstone was a 10-year-old problem. Even when I was on the NRC there were some questions being raised whether Millstone was being operated well. I think that was more endemic to the people who were running Northeast Utilities and carrying this attitude down through. I've had an opportunity to talk to a former senior person at Northeast who ended up being forced out because he was trying to make the kinds of changes that should have been made. I don't think that's what happened throughout the industry, but the NRC — the term I used — got burned. They came under very harsh criticism for allowing Millstone to keep happening.

When it turned out that issues had been raised and, as I mentioned, the regional director had said he didn't think there was any solid regulatory reason to shut them down — in previous instances, previous regional directors had taken the attitude: "The plant is a serious problem. I'll shut it down and we'll see whether the court agrees I was right."

**Mr Conway:** The other question that was interesting for me, that came out of something you said earlier, was that this business about running a nuclear operation is not like running a fossil plant. In this province we are looking at a competitive marketplace. There are already some announcements about disaggregating the vertically integrated public utility that we've had.

Thinking now about a generation company that's got some serious ongoing troubles with the nuclear side — and 63% of this public utility on the generation side is nuclear, but we've got fossil, we've got hydroelectric — is there an argument to say that, given the particular characteristic of nuclear power, within generation there should be disaggregation, that nuclear should be set apart and run as a discrete nuclear company and let the hydraulic and fossil people run their enterprises because they are sufficiently different breeds of cat?

**Mr Ahearne:** The issue of deregulation or deregulatory environment and separation, those are areas on which I am not an expert.

**Mr Conway:** I know that.

**Mr Ahearne:** It does make sense, and all of the larger utility companies follow this, that the nuclear operation is a separate unit and the fossil operation is a separate unit. Even in the company I'm most familiar with now, which only has two nuclear power plants and about seven fossil plants, they are two operating branches. Every utility with which I'm familiar that has nuclear power plants separates and has nuclear operations and fossil operations headed by a vice-president, a senior person, so they don't try to mix the two.

**The Chair:** Mr Conway, having now trashed my boy scout image of the parliamentary system, let me just see if we can now move for one final round of this, beginning with you, Mr Laughren, and then we'll be able to bring this to a conclusion.

**Mr Laughren:** He may have trashed you but I thought he paid a compliment to Mr Galt.

**The Chair:** He did indeed.

**Mr Laughren:** Mr Ahearne, we won't embroil you in the local politics here. I was struck by the difference in the two communities we visited in the last couple of weeks that have nuclear facilities. One was a relatively remote area where people love their nuclear plant, if I can exaggerate it a bit, and were very, very worried about its imminent shutdown. The other place we went to, where it's humming along, is a community where they are demanding an environmental assessment, and there was no great love expressed in that community — there may be some there, but it wasn't expressed to us — about that facility. Is it common in communities that you'll get one community that wants to hug its nuclear plant and another one that wants to kick it? Is that common?

**Mr Ahearne:** My experience in the US is that if the nuclear plant is a major portion of the tax base or the employee base, they love the plant. If it's peripheral to the tax base or the employee base, then the people who are strongly interested are those in opposition.

**Mr Laughren:** Has opposition at the local level ever led to a major change or even a shutdown of a plant?

**Mr Ahearne:** Yes. Not so much a shutdown, but the plant that was planned on Long Island never went into operation because of the strong local opposition.

**Mr Laughren:** What about the opposite of that? Did very strong support for a plant ever lead to actions like, for example, reopening one that wasn't intended to be reopened?

**Mr Ahearne:** No. In the United States, once a plant has been built, its operation or non-operation is essentially determined by the Nuclear Regulatory Commission and they go by concerns about safety as the issue. The plant that was not allowed to operate did not get its operating licence because the local community, backed up by the governor, refused to approve an emergency plan, and that was a requirement —

**Mr Laughren:** Which you would have to have.

**Mr Ahearne:** Yes.

**Mrs Johns:** I just want to ask you some questions about the strengths and the weaknesses of the Canadian system and what we can do to beef it up. The government in Ontario has just introduced a white paper which talks about the future of energy, and it has been highly praised. One of the things this white paper has suggested is that we need to put more teeth, if you will, into our regulatory authority.

I was interested in some briefing notes we got from our consultants here that you talk about the strengths and the weaknesses of the Canadian and the American systems. I'm sure you haven't seen this in a long time, so let me just review. Some of the strengths you talked about were:

"The system is very flexible, more rational from an engineering perspective, and the design envelope is developed more readily to address the question, 'How safe is a reactor?' from a variety of perspectives." Those were the strengths you suggested were important in our regulatory authority.

1710

Some of us who have been sitting on this committee for up to eight weeks, I think, see some of those right now as some pretty big weaknesses in the system. We find that it was so flexible that in fact problems that were recognized had slid through the process for 10 years, it would seem. The engineering perspective is what Andognini sees as somewhat of a problem, that they need better managers and not so much engineering base.

From that standpoint, I guess I'm looking for some information from you that you would recommend to this committee, that we could put in our report, about how to give a regulatory authority more teeth. What do you think we need to give it teeth?

**Mr Ahearne:** I have to start by saying I am not familiar with how the AECB has evolved.

**Mrs Johns:** I understand that. You can use the American system and apply what you think we need to do from the American system.

**Mr Ahearne:** One point I think has to be clear: The local residents are not cooperative people involved in running the plant. They are representatives of the regulator. The regulator has to be able to have the authority and evidence the willingness to be at arm's length from the licensee, from Ontario, and be willing to force the licensee to take action when the regulator concludes that action is necessary on the ground of safety.

**Mrs Johns:** What powers should they have that will be the stick, if you will?

**Mr Ahearne:** The three sticks are (1) to be able to shut the reactor down, (2) to be able to be very public in their criticism, and (3) to be able to make them pay a lot of money.

**Mrs Johns:** Fines would be the last. Okay.

**Mr Ahearne:** In the United States the biggest stick turns out to be the publicity.

**Mrs Johns:** So they are arm's length. They have to be able to wield power, I guess. Anything else you would recommend that we give this board?

**Mr Ahearne:** The regulators end up being torn. Sometimes the engineering staff in particular believe their job is to make sure the reactors run. The regulators' real role is to make sure the reactors are safe.

**Mrs Johns:** How about the regulators? Should the regulators have any expertise? What kind of expertise should we demand —

**Mr Ahearne:** Of course.

**Mrs Johns:** I understand that "of course" would be the answer. What kind of expertise should we be looking for?

**Mr Ahearne:** They have to understand a nuclear power plant. They have to understand the difference between a safe operation and an unsafe operation. They have to know what is good operating practice. They have



to be knowledgeable. Otherwise, all they will do is attempt to interfere with the operations and they can actually make it unsafe.

**Mrs Johns:** Tell me the kind of people you think we need to have in this regulatory body to make sure we have knowledgeable people. Just help us out; we're politicians here. Do we need a nuclear physicist? Tell us what we need here.

**Mr Ahearn:** Not a nuclear physicist. Nuclear engineers are the people you need. They're the ones who understand nuclear reactors. I will say that 10 years ago the lower staff people I met in the AECB were knowledgeable and they understood reactors. I didn't find a weakness in their knowledge. It was the system didn't allow them and didn't force them and require them to use it.

**Mrs Johns:** If people are going to be regulating private companies — and we've never had the experience of that in Ontario — and maybe they won't be nuclear admittedly, but they're going to be regulating the energy, is there some requirement we would need from the regulator from that perspective that maybe we haven't thought about?

**Mr Ahearn:** Not that I know of. In the US they regulate both private companies and public companies and there wasn't any difference.

**Mrs Johns:** Will the private company be deterred from shoddy operations through the same public disclosure, fines and that kind of thing?

**Mr Ahearn:** It depends on how they make their money. If they make their money in such a way that public disclosure makes it more difficult for them to make the money, yes.

**Mrs Johns:** I just want to ask one more question. Mr Conway was touching on this. I guess the last concern comes from regulation again. We're going to have one dominant partner in the marketplace because we have Ontario Hydro, which at the beginning will have 80% of the market, and it will go down of course as different generation comes in. Are there some specific regulatory things we would need because we have a dominant market player?

**Mr Ahearn:** I'm really not an expert in market shares, market control. My approach on regulating a system wouldn't make any difference whether it was through a multiple or single; you'd still have to have the same level of regulation, the same discipline, the same knowledge etc.

**Mr Conway:** Mr Ahearn, I take it that in the prescriptive regulatory framework of the NRC there are clear benchmarks, clear standards that are understood, advertised and applied with some degree of rigour.

**Mr Ahearn:** There are clear benchmarks. They are understood. The application is what was being questioned in some of the reactors then.

**Mr Conway:** In the latest phase, how are your successors at the NRC applying those standards?

**Mr Ahearn:** What they attempted to do in the last five years is shift to using the performance of the reactor

and a risk base. For example, instead of saying in the technical specifications for the reactor operation there might be 50 different requirements, the issue would be look at all 50, decide which ones are most important for reducing the potential risk of an accident and concentrate on making sure that those are followed explicitly and not put as much attention on the others. Instead of looking at the about 20 different regulations that affect the scram system, look at how many times you have an automatic scram, which is the automatic shutdown of the reactor.

They were trying to shift more to application of risk analysis, the application of performance, and then when Millstone came along they have fallen back to, "Let's just make sure everybody follows every regulation."

**Mr Conway:** I take it that when you looked at the Canadian or the Ontario reactor scene 10 or 12 years ago it was much more of a kind of a fog. There didn't appear to be any clarity or any real definition to standards or benchmarks.

**Mr Ahearn:** That's right. There was this very broad envelope document and a few consultative documents but beyond that it was primarily a set of operating agreements between the AECB and Ontario Hydro.

**Mr Conway:** I think the average citizen reading the documentary evidence that the federal regulators supplied to this committee, now a month ago, would be just left incredulous: good people, smart people, well-intentioned people at both the regulatory side and the utility, both agreeing on serious, worsening, ongoing problems that were beyond their collective ken to fix. You just scratch your head and say, "What is in the air of the place that makes good people incapable of addressing a problem" in an area which — I tell you, I suspect that if some of this stuff had ever been made public in 1990, 1991, 1992 or 1989 it really would have changed the climate in which the nuclear expansion was occurring.

That, again, is a backdrop and I come back now to, say, Duke Power. You just used a very good set of examples. The impression I got was that Duke Power has had quite a good ongoing operational and performance record, and TVA over much of the same period just struggled in the best of the Ontario Hydro troubles. What was it about Duke Power, beyond what you've said, if we look at Duke specifically? It was just better leadership and a better culture, better recruitment, better ongoing training, better —

**Mr Ahearn:** All of the top people I've met at Duke Power were very knowledgeable on how to run nuclear reactors and how to lead people.

**Mr Conway:** When you contrast that with —

**Mr Ahearn:** TVA was a political organization. The TVA commissioners were a set of political appointees. They were never chosen for having any understanding of operations. As a result, when you went down through the system, there was no sense that, "We have to concentrate on competence first."

The system grew, it got enormous. It got so bad in TVA that for the engineering staff to make a recommendation to the operating staff they ended up coming to the Nuclear

Regulatory Commission and asking us to make a recommendation because it took them so long to get it up to the top and come back around on the other side.

1720

**Mr Conway:** That may be just the right place to end my questions.

**The Chair:** Dr Ahearne, I thank you very much for attending upon the committee today and for your evidence. I had one question to ask, only in terms of your experience in overseeing decommissioning.

**Mr Ahearne:** We have really not yet decommissioned a major reactor. We decommissioned some very small ones.

**Mr O'Toole:** Is Three Mile Island still smoking?

**Mr Ahearne:** Three Mile Island is still —

**The Chair:** Mr O'Toole, I wonder if we can just let Dr Ahearne respond to my questions.

**Mr Ahearne:** The real problem we're facing in the United States in decommissioning is whether there's going to be enough money in the funds that were originally set up to decommission the reactor. It's relatively easy to shut the reactor down, take the fuel out and put it into a fuel pool. But now what do you do? You have to have some place eventually to store that fuel. We in the United States don't have any place to put it. One wants to dismantle the reactor eventually. The costs that were originally estimated, which were in US dollars, between \$100 million and \$150 million now look like they're going to be more like \$400 million to \$500 million.

**The Chair:** That's US?

**Mr Ahearne:** US. The funds that were being put in place for the reactors aren't going to generate that amount of money. In particular, if some reactors are being shut down 10, 15 years before their expected lifetime, then that fund certainly isn't going to be full enough. So we're facing questions about how we're going to fund that decommissioning.

**The Chair:** Is that \$4 million to \$5 million to restore to greenfield conditions?

**Mr Ahearne:** That's at least to restore to brownfield.

**The Chair:** I think I'd like to have you now make the definition.

**Mr Ahearne:** The definition is, brownfield leaves it in a way that's zoned for industrial use; greenfield is completely residential.

**The Chair:** It would not pass an EA for the greenfield condition.

**Mr Ahearne:** That's right.

**The Chair:** The final question I had goes back to some earlier questions concerning the future. A number of members of the committee were asking you the question of nuclear versus natural gas. Your sense of the fuel cell and its positioning in the future would be what?

**Mr Ahearne:** I try to stick to those areas in which I really have spent a lot of time studying. Fuel cells are not an area that I've spent a lot of time on.

**The Chair:** I appreciate that response. Dr Ahearne, I really do appreciate your attending upon the committee and your forthright answers. We appreciate that so much.

If we have need for any further information, I hope we can call upon you again. Thank you so much. You are excused.

## COMMITTEE BUSINESS

**The Chair:** Members of the committee, there are several other items to go through and we can do that in a moment. I will remind you that there will be a vote in the House at 5:45, I believe, so we will have to respond to that when the bell rings. I want to go over the agenda for this week to make sure we're all — Mr O'Toole?

**Mr O'Toole:** I'd like to explain to our guests that it isn't St Patrick's Day in Canada.

**Mr Conway:** I thought you might want to elaborate on your point about, "Is Three Mile Island still smoking?"

**Mr O'Toole:** No, but it isn't St Patrick's Day in Ontario.

**The Chair:** Thank you so much, Mr O'Toole. We appreciated that intervention.

In terms of the agenda for the remainder of the week, I will ask you to take note that in open session tomorrow afternoon, and particularly as well for our viewers, at 3:30 pm, Donald Macdonald, the former chair of the Macdonald commission, will be reporting and standing here along with us. You will see other deputants who will be with us to witness; 4:30 to 6 pm is still to be confirmed. There may be some comments from members of the committee about that. Open session on Thursday with the Ministry of Finance and open session on Thursday afternoon with Ontario Hydro and McGill University Centre for Climate and Global Change Research. That almost winds up all the witnesses for this committee.

**Mr Conway:** The Ministry of Environment?

**The Chair:** Dr Galt, I think, wanted to get my attention on that.

**Mr Galt:** Of course on Monday Mr Farlinger will be with us. That's confirmed, is it?

**The Chair:** The clerk is just telling me Monday or Tuesday. Do you have any preference?

**Mr Galt:** No, I don't; it was more a question than a comment.

**The Chair:** I'm in your hands. I'm happy to bring him forward for Monday.

**Mr Galt:** Whatever.

**The Chair:** Let's just check here for a second. I've just been advised that we have one little glitch, and that is that our legal counsel may not be able to be here. As you may recall, this committee had asked that our legal counsel head off for the first half-hour with Ms Clitheroe. He will not be able to be with us for Thursday afternoon so we may have to put Ms Clitheroe over to Monday. We're trying to restructure that. That's why I was a little hesitant to give which day we're about, Mr Galt. Do you have any suggestions other than that?

**Mr Galt:** No. I just wanted to comment on the environmental issue that we were struggling with yesterday. I'm pleased to see on Thursday from 5 to 6 the Centre for



Climate and Global Change Research. I think that's an ideal one to have there.

As it relates to the ministry, there's really not that much we can question them on. I would suggest we ask for them to give us the regulations and the status of Ontario Hydro so we have that in the record. I would like to suggest we invite Patrick McNeil, who's in charge of alternative fuels, and that we be able to question him on their plans rather than trying to question ministry people on some assumptions. I think that would have more value, and then get in hard copy from them the regulations and the status of Ontario Hydro, how they've been meeting the acid rain countdown and that kind of thing.

**The Chair:** When would you propose Mr McNeil come before the committee?

**Mr Galt:** Soon.

**The Chair:** All right. Let me go to Mr Laughren for a moment and then to Mr Conway.

**Mr Laughren:** First of all, can I make a personal pitch on the Monday thing? I don't know what you've got planned and I don't expect the committee to function according to my whims, but I have enormous difficulties on Monday. I appreciate the fact that the committee has to meet even though I can't be here, but I would appreciate knowing as soon as possible what the intentions of the committee are on Monday, because if it's environmental stuff I'd ask a different colleague to come than if it was something else before the committee. I just leave that plea with you.

Second, I'm not sure what Mr Galt's saying, but I think he's speaking as PA to environment when he makes his pitch. Speaking as a member of the committee, it seems to me that we want the Ministry of the Environment here to answer questions. I like the group that's coming from the university, I think that's a good idea too, but I think that has nothing to do with the fact that we want the Ministry of Environment folks here.

**Mr Conway:** I agree. I think the McGill group is excellent. But one of the most significant and I dare say controversial aspects of the recovery plan is the nature and the extent and the cost of the replacement power. We are going to be facing a considerable public debate, just as the previous witness said, about greenhouse gases and all of the rest.

I really do think, because the recovery plan apparently is going to commit Ontario's public utility to generating and purchasing a lot of additional fossil-fired electricity, that we have an obligation as a committee to invite and to cross-examine both the provincial and the federal environment ministries, which have presumably some kind of mandate and regulatory function in the public interest on those matters. That to me is self-evident.

The environment ministries both provincial and national are going around telling people who run chicken coops and run car plants and all the rest of it —

**Interjection:** Pig farms.

**Mr Conway:** — pig farms, about what they can and can't do, what they should and shouldn't be doing with respect to air quality. If we're going to take the position as

a committee that the recovery plan, with its commitments for increased fossil-fired electricity, and we're not going to have them here — if they don't want to come, if they refuse to come, that's one issue, but I think it's absolutely essential that we have ideally both, because there are transboundary issues that I would like to hear from Environment Canada about.

1730

**Mr O'Toole:** I support the importance of the environmental concern, but I think the ministry has a guideline or sets some standards on emissions control. I think most certainly, whether I'm addressing the technical ministry responsibility but certainly Patrick McNeil from Ontario Hydro, we need to say now that it's clear, as you said, that the environmental conference, the clean air conference that's coming up in Canada, make it very clear what their expectations are for the use of fossil as part of replacement fuel. That's my understanding. I think he's very definitely a witness I would like to revisit and challenge some of those assumptions that were made for the emissions and buying back credits for emissions, recognition of the environmental importance for sure.

What is the sequence here between — are we thinking of them for next week? This week we're going to talk to the McGill Centre for Climate and Global Change Research. We can raise those questions, we can bring those reports to their attention and have them explain it.

**Mr Conway:** John, the other thing is, we've heard from the Ontario Clean Air Alliance. I want to hear from the Ontario Ministry of Environment. I want an opportunity to cross-examine them on some of the very serious testimony presented by the Ontario Clean Air Alliance. Remember, McNeil is the proponent. He's a good guy and I'm happy to have him back, but he's with the people who want to do the recovery plan and I expect he's going to behave like a proponent. I would like to get somebody from an environment ministry to say, "Have you got any views on any of this stuff?"

**The Chair:** Let me just remind us where we're at. Wednesday, the 4:30 to 6 slot is still available. We had directed the staff to try to make arrangements with the consortium to be here. There's no further information about that available. We're talking about Clitheroe being slipped out of the Thursday 3:30 to 5 pm slot into Monday. Then to wind up the arguments, all the witnesses, the last one would be Mr Farlinger, is how I gather the committee is moving. That would be on Tuesday, which I gather is the date he would be available. That would be all that's available at that point.

**Mr Laughren:** We've got Monday evening as well.

**The Chair:** Or Monday evening if he's available. That would also help collapse the time frame a little bit for the committee. I'm aware of the need to keep us on track.

**Mr Galt:** As part of the thinking in putting this forward, I had the opportunity last Wednesday to tour the Lennox generating station. What I was hearing there was the recovery plans are different in that station from what we were hearing earlier as it relates to the sulphur level in the oil they're buying, as it relates to the gas coming on

stream. It's now coming on earlier than we had previously been led to believe.

Therefore, I think it's important that we start looking at the priorities of who we get in. We can get all the information from the Ministry of the Environment that we need in hard copy. They'll come in and we'll start asking about assumptions; they won't have any answers about assumptions, whereas we can bring in somebody like Patrick McNeil, who we can query on what their real plans are. We haven't heard what their real plans are: sulphur level of coal or oil, or what plants are really going to come on with gas. It's changing by the moment from what I can gather, having been at the Lennox generating station last Wednesday morning.

That's why I'm encouraging that we get somebody we can cross-examine and inquire as to what their plans really are. We've got the information from the Ministry of the Environment very simply in print. We've got to get some priorities here and get on with writing this report. December 1 is only 10 days away now.

**Mr Laughren:** I understand what Mr Galt's saying, but at the same time we have been told what Ontario Hydro intends to do in its recovery plan. They gave us the numbers on sulphur emissions and they were right at the limit that's been voluntarily agreed upon with the Ministry of the Environment. That's what Hydro tells us. I remember that quite clearly. It went right into, some years it was up and some years it was down a bit and so forth.

I want the Ministry of the Environment people here to talk to them about Hydro's plans. I don't want to talk to Hydro about their plans any more. They've got their plans; they've told us what they are. They told us what they're going to start up and what the levels will be. I know that. I don't need to be told again. What I want to know is the Ministry of the Environment's views on this whole thing as we go down the road, because I think that's important. Out there in the public, we may end up with a bigger debate on that issue than we do with some of the other issues that we've been preoccupied with. I don't know that, but I wouldn't be surprised, as the debate around emissions and global warming heats up. I think we need the Ministry of the Environment here.

**Mr Conway:** We as a committee are obligated to write a report based on the evidence the committee has heard. I've been to lots of interesting places. I've been to Lennox and I've been here and there and everywhere, but the committee hasn't. It's completely ridiculous for me to come in here and say, "I want the report to reflect a very interesting visit I had to" — because you weren't there; we weren't there.

As it stands now on the environmental question, we have heard relatively little. We heard some very strong testimony from Jack Gibbons and the Ontario Clean Air Alliance. If nothing else, I'd like to give the Ontario Ministry of the Environment some opportunity to come in here to speak to some of the very serious matters raised in that testimony and to give the committee an opportunity — that was very good testimony we heard this afternoon from

Ahearne. I learned some things I wasn't expecting to learn, and I'm happy we had that opportunity.

I can't believe, given the sensitivity of the environmental issue generally and what we know about what the recovery plan commits us to — if we don't make some reasonable effort to have somebody from the Ministry of the Environment for the province of Ontario come and speak their piece about the recovery plan. I think we will look foolish.

**Mr O'Toole:** With all respect, I recognize the importance of the environmental issue myself. I say that for the record. I also believe we talked about having the federal ministry people here. They're the ones who are going to be speaking for Canada's conformity to emission standards at the Kyoto conference. It's my understanding that there have been discussions with the provincial ministers of the environment in Canada to develop a Canadian position on this. So I'd be very pleased to hear from the federal people. We had kind of agreed to that.

I suspect, from the discussion, that Mr Galt will probably go back and make it clear that — you see, my understanding is that there are emission standards today. What we're really trying to do is to draw some kind of regression between what their forecast use is and whether they meet or exceed those guidelines that the ministry will indeed enforce. So the ministry can't come in and all of a sudden change those guidelines to suit this particular situation.

It would be my understanding to say, "These are the guidelines." As Mr Galt says, those could clearly be given to us. We could then have staff translate those into, are they exceeding those guidelines and what reactions or response will the ministry take to enforce or ensure that they don't exceed those standards? I think that's a fair question, personally. I wouldn't expect the ministry to come in and say, "Are you going to redraw those guidelines today?" So what can they say, really, until they see some breach of those commitments to the ministry's guidelines?

I do want to hear from the federal government, though. For the record, through the Chair, can we?

**The Chair:** I want to make sure I'm very clear: You want to hear from the federal but not from the provincial?

**Mr O'Toole:** I didn't say that.

**The Chair:** I just want to be clear, Mr O'Toole, that's all.

**Mr O'Toole:** Yes, for clarification, that's what I did say. I didn't say "Not the provincial," for the record.

**The Chair:** For the record, did you say you want to hear the provincial?

**Mr O'Toole:** Yes, I'm interested in their position.

**The Chair:** You want to hear from the provincial as well as the federal.

**Mr O'Toole:** Sure.

**The Chair:** Thank you. That's what I wanted to hear.

1740

**Mr Kwinter:** I just wanted to reinforce what we had discussed the other day in that it isn't really a matter of getting from either the federal or the provincial



environmental authorities what their acceptable levels are. We know what they are. What we really want to know is their impression of this recovery plan and how that is going to impact on the environment, both from a federal perspective and a provincial perspective, and I think the federal people should also be able to tell us what studies they have done to see what the results would be from fossil fuel generation in the United States that could be feeding into the grid.

I think it's critical that we have that kind of opportunity to investigate and get their impression, get their concerns or their endorsement or whatever it is, so there is a comfort level in this report about what the implications of this alternative fuel program are going to be from an environmental point of view. That's basic, and I thought we had already decided that.

**The Chair:** My function is to facilitate the matters of the committee to the best of my ability. To that end, I'm trying to determine what you'd like to do. We have two time slots that are available: They are Wednesday afternoon 4:30 to 6 and now Thursday, 3:30 to 5, where we have shifted Clitheroe over to next week. I have had suggestions from two and a half caucuses that we hear from federal and provincial, but I've heard from the lead of the government caucus that he would prefer to hear from certainly one group.

What I need to do is simply put this to some kind of a question to facilitate matters for the committee. I don't want to be distressful and I don't like going beyond a straw vote, if I can, to start with, so Dr Galt, if you'd care to phrase some business for the committee, let me put it to a vote to make sure we're very clear. It's a matter of, would you care to hear from the Ministry of the Environment people or not?

**Mr Galt:** I'm putting forth the motion that we should call Patrick McNeil for environmental issues and to discuss the use of alternative fuels in the fossil generation plants.

**The Chair:** Let me just put that to the test, first of all. All in favour of that?

**Mrs Fisher:** May I have a question before you do that? Does he still have the responsibility for the alternative fuels?

**Mr Galt:** That's my understanding, yes.

**The Chair:** Can I just pause for a moment? To facilitate matters for the committee, before I take any votes, maybe I could ask if you'd take a moment to confer. I want to make sure we're very clear on this. I'm trying to facilitate matters for the committee and I don't want to be troublesome for you.

**Mrs Fisher:** I just want a point of clarification before we do that. I understand he attended the meetings two weeks previously with regard to the financial recovery plan. My understanding is that he has moved from under Mr Fox's domain over to Mr Farlinger's domain. I would like clarification as to whether he is still responsible for alternative fuels. If he is, I will support having him here. If he's not, if you want to bring him here on finance, it's another issue.

**Mr Galt:** May I ask for a five-minute recess, Chair?

**The Chair:** You may indeed take a five-minute recess. Can I just be very clear: Government members, please note the time. When the bells in the House start to ring, whether we like it or not, that is the end of the committee activity for the day. Are we clear about that? We'll take a five-minute recess.

*The committee recessed from 1744 to 1746.*

**The Chair:** We're back in session, if you can do it in one minute.

**Mr Galt:** Very quickly, Mr Chair, we would like to propose that we invite from Ontario Hydro the person who is in charge of alternative fuels for these fossil fuel plants, just in case Patrick McNeil is not the right person. I would so move.

**Mr Laughren:** Chair, we're not going to get through this in time to do the vote.

**The Chair:** I will have to take that as a notice of a suggestion; we'll have to pick this up again tomorrow, defer this until tomorrow. The committee will stand adjourned until the appropriate hour tomorrow, and we will now adjourn to the House for the vote.

*The committee adjourned at 1747.*





## CONTENTS

Tuesday 18 November 1997

Mr John Ahearne .....	H-559
Committee business.....	H-569

### SELECT COMMITTEE ON ONTARIO HYDRO NUCLEAR AFFAIRS

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H-19

H-19

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Mercredi 19 novembre 1997

**Select committee on  
Ontario Hydro nuclear affairs**

**Comité spécial des affaires  
nucléaires d'Ontario Hydro**



Chair: Derwyn Shea  
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## LEGISLATIVE ASSEMBLY OF ONTARIO

SELECT COMMITTEE ON  
ONTARIO HYDRO NUCLEAR AFFAIRS

Wednesday 19 November 1997

## ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

COMITÉ SPÉCIAL DES AFFAIRES  
NUCLÉAIRES D'ONTARIO HYDRO

Mercredi 19 novembre 1997

*The committee met at 1543 in room 151.*

**The Chair (Mr Derwyn Shea):** The select committee on Ontario Hydro nuclear affairs is in session. When I left off yesterday so we could adjourn for the division in the House, there was a motion before us placed by the government caucus.

**Mr Doug Galt (Northumberland):** On further reflection, we will withdraw that motion.

**The Chair:** Is that agreeable? All in favour? Opposed? Carried.

We will proceed to the business of the committee. We are moving towards our deadline, as you know. December 1 is looming and the committee is of a single mind that we will hit that objective. Today we have a very distinguished deputation. Just before we get to that, I ask members to note the submission on your desk now from the Ontario Natural Gas Association. The very quick review I've been able to give it indicates that it is of signal importance to us all. Please read that. That will be considered by our staff for its writing of the report.

ADVISORY COMMITTEE  
ON COMPETITION IN ONTARIO'S  
ELECTRICITY SYSTEM

**The Chair:** Now I welcome Donald Macdonald to the select committee. We appreciate very much your presence and agreeing to provide testimony to the committee.

For the purpose of Hansard, Mr Macdonald, though you're extremely well known, would you please identify yourself and your distinguished colleagues at the witness table with you. Then we're in your hands to make whatever opening statements you'd care to make.

**Mr Donald S. Macdonald:** First, we'd like to thank the Chair and members of the committee for the opportunity to appear. I'm the Honourable Donald Macdonald, the chairman of the advisory committee which reported in June 1996. On my immediate right is Dr John Grant, who was a member of the committee and who is an economist by profession. On John's right is Dr Jan Carr, who is an engineer by profession and is associated with Acres International, the Toronto engineering firm. We represent the three different vocations and will be happy to respond in that way.

I've left for committee members a précis of some of the thoughts we have at this particular point, but of course

we'd be glad to go further into other questions if you feel it might be of assistance to the committee.

Obviously, in the aftermath of the white paper, much has been said on the public record that we would have said anyway. As you know, the white paper accepted the principal recommendation of the advisory committee that the virtual monopoly which Ontario Hydro has enjoyed for many years should be brought to an end, and that Hydro will continue but would compete on even terms with the province's electricity market.

The white paper introduced a new element. First, the government set itself what we regard as a tough matrix, to have change effective some time during the year 2000, and not only would it do as we had proposed — restructure the wholesale market for electricity within the province and therefore make some structural changes in the generation — but also it would undergo the restructuring of the retail market at the same time. We think it will involve some major changes. It's going to make the Legislature's job very busy with the changes to the Power Corporation Act, and a lot of administrative changes will have to be made.

One of the concerns that the advisory committee had when we were doing our work was the recognition of the fact that in Ontario, Ontario Hydro is, and would be after our recommendations, in control of more than 50%, in fact close to 80%, of the generation within the province. To talk about competition on one hand and then have a single party in control of so much generation, we were very concerned with the risk of non-competitive activity, of the dominant player in effect dominating the market.

One of our proposals of course was that some of the Hydro assets — not all of them, but some of the Hydro assets — would be privatized so as to have some independent players out there able to compete into the newly established market. Even then, we recognized that there would be competition policy problems.

In a sense, the problem remains with the white paper proposals. Hydro generation, in a standalone generating corporation, is going to be very large, very dominant in the market. One of the concerns we would have is that there be a structure there which would have the responsibility to superintend that market, the way it operates, and, if there is unfair competition arising just from sheer size, to take a role in that regard.

The white paper sees to the enhancement of the role of the Ontario Energy Board, making it a full-scale regulatory agency, and would endow the Ontario Energy Board



with some of the same responsibilities that the competition tribunals under the responsibility of the government of Canada have in this regard.

**1550**

It's been a long time since I've examined that particular question, but looking back to the Canadian breweries case, I'd agree with the judgement there that a provincial crown corporation is beyond the effective control of the federal competition policy bureau. That being the case, it's going to be important that the OEB exercise a very strong jurisdiction there, to make sure the value that the government, and I'm sure the House, will set on competitive behaviour is recognized. Keeping under public scrutiny the competitive behaviour of one of the generating companies is one of the concerns we wanted to communicate to you.

On the question of privatization, as I said a moment ago, our concern when talking about privatization was to try and create competition. In that sense, we weren't privatizing it for its own sake. There are two obvious advantages apart from competition. Of course, Hydro would get some of the money back in order to pay for its operations, but the government is not proposing to do this, and I think I speak for the three of us and for the committee in saying we acknowledge that it's not essential for this purpose. The essential thing is creating a new structure of a market which will make competition possible. In five or seven or 10 years' time, when there has been an operation of the new system, the Legislature of the day can take a look at that and decide what they want to do about it.

We refer to the spectre that was present at the announcement of the white paper the other day, and that is of course the *raison d'être* for this committee's hearings, namely, the difficult circumstances of Ontario Hydro's financing. Particularly after the announcement of the financial difficulties of Hydro's nuclear division, the minister was candid in acknowledging that there were no easy or immediate solutions for dealing with the heavy load of debt which Ontario Hydro bears and that managing the problem will be a major concern.

We articulated a formula, and Dr Grant is particularly qualified to speak to this, whereby over a period of time the then-existing stranded debt could be managed by the corporation as it appeared to be at that time. Those facts of course have been changed again. John, you may want to comment on that particular aspect of it.

In summary, we welcome the release of the government's plan. We think it's an essential first step. We have spoken in support of it and are happy to do that today.

I now defer to my colleagues if they would like to touch on points of special interest to them.

**Dr John Grant:** I don't want to add a great deal to what Don has said at this point. You probably have questions you want to pose to us. But I would want to point out that now we're looking at weaker nuclear assets than the committee anticipated, the generation corporation that will succeed to the ownership of all these generation assets will be a much smaller company. And even with the stronger balance sheet that will be provided for it by the

government's decisions, ex the government guarantee on debt, it will presumably have less capacity to refurbish the nuclear assets. It will have to go out on its own recognition and raise any moneys that will be required to do that.

I'm not sure that all of us in the province have yet got our minds around the implication of a \$6-billion to \$10-billion corporation trying to refurbish \$6-billion-plus of nuclear assets of uncertain futurity, as opposed to a nominally \$32-billion corporation with a government guarantee doing that. It's not just a question of handling the handed-off stranded debt, which the government has many options for doing, but rather looking at the nuclear assets in the context of a struggling, competitive Genco, albeit with a large share of the market going in, in a totally new situation.

**Dr Jan Carr:** I'd just emphasize one point that I think is probably important to your considerations, that is, that the structure that has been recommended in the white paper spends a lot of attention on the implications, providing some discipline to long-range planning, to capital planning, to capital spending and so on. Too often, I think, restructuring focuses on a rather short-term goal of driving rates down tomorrow sort of thing.

I think the structure that has been in place, in particular the moving to wholesale and retail competition to happen on day one, so to speak, is very supportive of that approach. It's probably the main advantage that comes out of putting a competitive market in place. Sensible capital spending today does influence tomorrow's rates, and that is exactly what the structure proposed has as its strength.

**The Chair:** Thank you very much. We will proceed with the questioning by caucus. We'll start off with the five-minute rounds so we can give everybody a chance to get into the first round. We'll begin today with the government caucus.

**Mr Galt:** Good afternoon. You people did a lot of investigating and looking into Ontario Hydro, I expect, in general. We had quite a surprise back in the middle of August with this announcement about the nuclear problem, at least it was a surprise to a lot of Ontarians. We knew about your report. Did you get any feeling that the nuclear reactors or generators were in as much trouble as was announced in the middle of August?

**Mr Macdonald:** I can speak only for myself in the sense that I was professionally in no way involved with Hydro. I was astonished when the announcement was made in August about the shortfall of Ontario Hydro Nuclear. May I say it was a deep disappointment. Twenty-two years ago, as Minister of Energy, Mines and Resources, I attended the opening of the first Pickering plant. I've been proud of the system, and of course as the federal minister responsible for the AECL, was a great advocate of it. I was stunned, frankly, when the announcement was made of the proposed shutdown. I knew they'd had troubles at Bruce, I knew they'd had interim troubles at Pickering, but I had no expectation — Jan, you were of course closer to the field than I was.

**Dr Carr:** Well, I don't think sufficiently closer to have any improvement on that perspective. I do notice and did notice at the time, and of course it's well established, that the problems are problems of management. It's important, and in our committee's consideration we did look to the nuclear plants as being a very important asset of the province, as physical assets. In spite of the difficulties, it is encouraging to see that the assets themselves are not at issue here; it is the way the assets have been managed.

**Mr Galt:** Did you people get to tour these plants during your review, during your study? Were you in and out?

**Mr Macdonald:** We actually did not. In our own defence, could I say that the life of the committee was five months, which included Christmas 1995 and New Year's, so we really didn't get going until January 1996 and it was a short period of time. I of course had been in a number of the plants before, but no, not currently; the committee did not visit them.

**Mr Galt:** Why I asked was that I was just wondering if you might have got a tour similar to ours. Things looked pretty good where we got toured through. Maybe the areas we should have seen were the areas we weren't being toured into. But we've seen pictures from the AECB, some pretty disastrous-looking pictures of a year or so ago as to what was going on in Pickering A in particular, and they sort of suggested that maybe this was going on in many other areas. Some of the horror stories I've heard about Darlington during the construction period there, how the stuff was being carried away faster than they could bring it in in the supplies building, everything from horse trailers to fish huts and so on — I just wondered what kind of things you were seeing.

It's interesting that you were as surprised as the rest of the people in Ontario, because there were a lot of earmarks there that things were in trouble. Hindsight is great, but looking back you can see that there were earmarks that things were going awry.

1600

**Mr Macdonald:** My perspective — I didn't regard the Candu system as trouble-free. The experience we'd had, for example, with the metallurgy of some of the equipment there just confirmed for me that we were in the first generation of a particular technology with a long life, and as time went on difficulties were bound to show up, and they did. But I was unprepared for the extent of the shutdown that occurred. The last I remembered was 22 years before, and it looked a lot better then — but maybe so did I at that time.

**Mr Galt:** But maybe you've had better maintenance than the Candus had.

**Mr Macdonald:** I'm not sure about that either.

**Mr Monte Kwinter (Wilson Heights):** Mr Macdonald, the whole thrust of your report was dealing with competition. There was some confusion in the minds of some people. They felt that competition and privatization were the same thing, but you were talking competition, not necessarily privatization.

**Mr Macdonald:** Yes.

**Mr Kwinter:** This morning I heard a radio report, and unfortunately I haven't been able to find any text or any reporting on it, by the president of TransCanada PipeLines saying that as a result of the white paper's proposal that generation should remain with Hydro, with that 80% domination of the market they would not be able to compete — I'm paraphrasing — almost to the point where they wouldn't even try; that unless that generation capacity was broken up so there wouldn't be dominance in that sector, it's going to be a real deterrent to competition. Do you have any thoughts on that?

**Mr Macdonald:** The first thought I have is that I'm a director of TransCanada PipeLines and I'm a little surprised to hear that. The president didn't talk to me about that. I would be surprised if it would be possible, for example, for home heating purposes if electricity, even under the best regime by Hydro, could be made competitive with natural gas. Let me say, Mr Kwinter, that I know all about this. I'm a customer of Ontario Hydro Retail in Uxbridge township, and it's very, very expensive to be dependent for home heating on baseboard heaters with electricity. I can't imagine that TransCanada is going to have a competitive problem. You've tweaked my interest and I'm going to ask him what he had in mind.

**Mr Kwinter:** Again, I just heard this on the radio. When I got to the office, I started looking through the clippings, and I was through the Financial Post and the Globe, thinking that somewhere there would be some basis for this report. It wasn't something he said. It was a business report about what he said. I was just curious to find out whether or not you had any information on that and whether that was a concern for you.

**Mr Macdonald:** That's counterintuitive to me. I don't think that's a problem.

**Dr Grant:** I think it's important for the new market design committee and ultimately for the system operator to have sufficient transparency in the operations of the system that if there is any undue exercise of market power by the new Genco, it will become quite clear to everyone in the game and that the OEB and the ISO will have the requisite regulatory intervention powers, as necessary, to put that down.

My sense, when we were looking at the numbers as to how costly it would be to generate incremental kilowatts, was that there would be plenty of scope for merchant providers, if you will, within and without the province to come in and quite effectively compete in the new market. How much of the total power taken by Ontarians they could supply in the early years is an issue, but I for one had no thought that they couldn't be quite effective at the margin and would just be dogs barking at the big elephant.

**Mr Kwinter:** Dr Grant, I follow up on a comment you made about your concerns about the nuclear facility being downsized to a \$6-billion to \$8-billion — I'm sure not the nuclear facility, the generation —

**Dr Grant:** Genco as a whole.

**Mr Kwinter:** Yes, Genco as a whole being downsized to a \$6-billion to \$8-billion corporation with a potential liability of another \$6 billion to refurbish the nuclear. We



had John Ahearne here — he's a past chairman of the US Nuclear Regulatory Commission — saying that in his experience every generation company that's publicly owned has divided off their nuclear facility from their fossil or hydro-electric facility, that it was always a stand-alone situation.

If that were to happen, that would just compound your concern, I would assume, because there's going to be some sort of cross-fertilization between the revenues from the hydro-electric and the fossil to help create the kind of capital that's needed to refurbish the nuclear, particularly when it's in a down state. Do you have concerns about that?

**Dr Grant:** I think if you have different kinds of power to offer to the market, you can use the strengths of one to balance the weaknesses of the other and vice versa, so that you are a stronger company financially and in other respects. When you have a mixed operation, in terms of the ability to raise funds, though I'm not sure how it would play out, I think it would depend very much on the market's assessment at the time of the viability of each of the plants in the kind of market they're intending to serve.

It's probably too early to make any kind of meaningful comment on the likely success of such a company and whether it would be a greater success to start off having broken it down one stage lower. I think the government may have to revisit that issue before this is over, but at the moment to hold Genco together while we're at this early stage isn't necessarily the wrong decision to make.

**Mr Floyd Laughren (Nickel Belt):** Welcome to the committee. The white paper recommends that the provincial guarantee of Hydro's debt be phased out by the year 2000 as part of the level playing field scenario. I can't help but wonder what will happen in the year 2000. I appreciate the fact that the existing debt remains guaranteed. I understand that. But in the new world when Hydro decides they need some big bucks for their nuclear operations or whatever, what's going to be the reaction of the market to that when they go out there to borrow money? I don't know whether Mr Grant would be the best one to answer that.

**Dr Grant:** You have an operating company that has a revenue stream and you have any number of new competitors out of province and in. You have the likelihood, I imagine, that substantial new transmission facilities will be bruited and possibly under construction coming, for example, from Quebec, from Manitoba, whatever. It's going to be an uncertain life for any company in the electricity business and, however big it is, it's going to have some pretty flinty-eyed financiers to face.

That being said, starting off with what I imagine will be the preponderance of the usefulness of the Ontario Hydro nameplate, they will certainly have substantial strengths going in. So we're not looking in any way at a hopeless situation to get that financed. However, you wouldn't be looking at the Ontario credit rating, that's for sure, however strong the balance sheet might be given to start off.

**Mr Laughren:** I certainly learned a lot from the flinty-eyed financiers. I was wondering, though, about the nu-

clear units, that's what bothers me the most, that are so incredibly expensive if something goes wrong. It costs as much to fix them as it does to build a new other kind of unit, I would think, or maybe more.

That is what's got me worried about this new world. All the projections about the life of the nuclear plants have been wrong as far as I can tell and the projections on the costs have been wrong. You've underestimated those, whether you're talking about the building of Darlington or the retubing of one of the stations or whatever. I don't know how, if you separate and make Hydro too small as a base — I think there's a separate financial holding company; nevertheless the debt must be related to those assets somewhere in Hydro.

**Dr Grant:** May I just answer?

**Mr Laughren:** Yes.

**Dr Grant:** I think myself that moving to this new market-driven structure is the appropriate way to get the decision-making made sensibly in the context of a truly competitive environment. If those nuclear plants can be justified in that context, then let's go ahead and have a refurbishment. If, on the other hand, it appears that Ontario's marginal power needs can be supplied by a whole different set of technologies, then that would be the right decision to make. I think removing the public monopoly from the playing field is exactly the right move in the way of setting directions for those new investments.

**1610**

**Mr Laughren:** That I can understand, and I don't have a big problem with bringing competition into the system. What gives me the willies is that we're already faced with Bruce A being shut down and probably not reopened, we're faced with the possibility of the same thing with Pickering A and then you start thinking ahead of Bruce B, Pickering B and Darlington. I don't want to give a scary scenario here, but at the same time I worry about a diminishing base of the crown corporation that has to achieve revenues to pay not only for the debt that's there now — others will help, I assume — but also of any new ventures, any new attempts for the crown to continue to generate electricity. I don't know how you deal with that. I don't know how you anticipate that.

**Dr Grant:** Just to add another aspect to that, if we're looking at plants that now have much shorter anticipated lives, then we'll have to revisit the whole issue of how to account for decommissioning and whether you want instead of a notional fund, for example, an actual cash outlay which would create a sinking fund on which that company would earn interest, of course, but it wouldn't be at the marginal rate of return of its operations.

Those issues certainly have to be raised. One would hope that the province would in some sense stand ultimately behind the credibility of the nuclear assets under the worst circumstances.

**Mr Macdonald:** I've nothing to add to that. I'm sure the province ultimately will be there and we of course propose to — stranded asset charge — try and discharge this, but the weight that the stranded asset will have to

bear is much greater and probably it'll last a lot longer than we thought it was going to.

**Mr John O'Toole (Durham East):** Thank you very much for your esteemed presence here. I, as did many members here, read with interest your report, *A Framework for Competition*, and felt with that announcement there was a vacuum until the white paper arrived. Is it your sense that it was the response document, or is it just too naïve of me to put that question to you? Everyone was kind of waiting for that other shoe to drop.

**Mr Macdonald:** Do you mean the white paper as a response to —

**Mr O'Toole:** Yes.

**Mr Macdonald:** I certainly saw it that way. Indeed it dealt with a lot of the issues, generally speaking agreeing with us, but in a couple of cases not. But it was a response document.

**Mr O'Toole:** Perhaps you could describe your terms of reference briefly going into that study, that rather comprehensive view of stability of supply of affordable, sustainable electricity into the future. Did you feel any conclusions before you started the study that you finally have to bite into this big nugget, the Ontario Hydro monopoly? Is that what you felt going into that?

**Mr Macdonald:** The word "competition" figured in the title and it was prominent in our terms of reference. I have to tell you that the terms of reference went on for a full page and you could get almost anything you wanted out of there. But in the overall North American and world environments we felt what we were really being asked was to try and construct a competitive framework in which what had hitherto been a monopoly could be operated and how you'd get from A to B. The predominating theme would be that yes, we're going to competition, and then what remains is how you get there.

**Mr O'Toole:** That's right. So it was a bit of an anomaly in terms of how the generation side, distribution and the whole retail-wholesale side pretty much dominated just how you deal with the pieces.

I'm just going to move back for a second. I appreciate your remarks there. This committee's terms are quite specific, addressed in response, as you well know, to the Andognini report. We have the IIPA report and the nuclear asset optimization plan, that safety is first and the cost factors.

In some respects I'm sure, when I look at the safety and your shock — certainly the government and these members here need to address that — the AECB, a federal regulatory body, has the powers there. We heard yesterday from the American counterpart that there was some inability to take the next step and exercise that mandate.

With your experience and background at the federal level, do you feel that the mandate of AECB needs to be clarified with respect to who has the operation key, if you will, to actually shut them down? There have been warnings, six months, nine months, over the bow. They've been an integral part of the reviews, both the peer reviews and all the ongoing daily reviews, but there's been this lack of ability to translate that observation into an action. What

advice could you bring to the committee's attention in dealing with the federal regulatory body?

**Mr Macdonald:** I have to tell you that the federal regulatory body is a lot more independent than it was 22 years ago. At that time, some of the directors of Atomic Energy of Canada were also on the Atomic Energy Control Board. My successor, the Honourable Alastair Gillespie, was effective in making this distribution so as to make it an independent body.

I just have to say that I think the federal regulator would be presented with a problem particularly where nuclear got to be 61% of the province's generation. If it was really bad, could you really say, "Close them all down"?

**Mr O'Toole:** That's a very fair question.

**Mr Macdonald:** There's a little unreality if you try to apply that in practice.

**Mr O'Toole:** That's the problem we currently keep hearing. It was never stated as obviously as you've stated it, but the choices are being dark and cold, so they really aren't viable choices.

In your research into the financial assets, liabilities and other issues facing Ontario Hydro's board of directors, did you perchance refer to their annual reports, and were you satisfied? We've met with the vice-president, Ms Clitheroe. To my satisfaction as a taxpayer in Ontario, I'm not convinced that due diligence was in place. They do in footnotes — the auditor sort of signs this stuff; I'd refer you to footnote 19 — very clearly state that they have a significant portion to the stranded debt. They say in footnote 19 that there's some \$15 billion that they really can't work out. It's eventually going to fall.

Mr Grant, you would probably as the economist like to say — in your research, *A Framework for Competition*, you must have wrestled with this bullet. Who gets the ball? The people of Ontario are expecting this committee to address that. Now we're asked to say, "Is this board that's come up with the NAOP plan the proper board to say: 'Oh, it'll be fine. Just give us another \$10 billion'?" I feel very unstable, insecure in anything I've heard from their senior officers to support one more loan at the roulette wheel from a financial perspective. If you look at the debt-equity ratio, the underlying fundamentals, Mr Grant, I've had my chance to core dump my feelings on it. I'm not looking for endorsement. You're more qualified to analyse the documents than I am.

**Dr Grant:** On the basis of the projections we were provided from Ontario Hydro and then work done for the committee by a consultant, we independently came up with the idea that the current debt load of Ontario Hydro would be untenable in the new competitive environment even if they had the same percentage of the Ontario load they currently have or that they were currently expecting, even without, as Don says, any recognition on our part that those nuclear assets might be impaired, simply because the price at which they could sell the power would be substantially lower in the competitive market than what they were currently getting for it.



The number we came up with in terms of the stranded debt was not as big as \$16 billion, but it was in that ball park. Now I would have to think that with the potential impairment of the nuclear assets, if that turns out to be a major factor in operations, you'd be looking at even more stranding. I think Hydro's statement in its most recent report was very close to our own in terms of the number they come up with, but I think if we came up with a number today, it would be an even larger one.

1620

**Mr Sean G. Conway (Renfrew North):** Thank you, gentlemen. Mr O'Toole has anticipated very directly my line of questioning, so let me begin.

Just a few days ago we had testimony from the senior brass at Ontario Hydro, and by a few days ago I mean 10 days ago, where I think I fairly summarized their current financial situation as essentially the following: Their debt-equity ratio, charitably put, is about 94 cents, 95 cents of debt for every \$1 of equity. They are operating on a plan where they expect to have negative income for the next three or four years. They are on the verge of competition and they're faced with an unexpected multibillion-dollar nuclear recovery plan. I think that's a fair representation of what we were told just a few days ago.

We were told furthermore that their recovery plan — their official line is that their recovery plan was calculated on the basis of the monopoly status continuing over a five-year period. One has to believe that privately that's not the case, but that's what they advanced at the committee.

I'd like then to ask you very directly: One of the things the committee is going to have to recommend upon very shortly is, what do we suggest or recommend in the near term about this \$5-billion to \$8-billion nuclear recovery plan? Given your experience on the advisory committee, what you know about the white paper that was announced, and you're all citizens and taxpayers of Ontario, what would you specifically advise this committee to think about and perhaps recommend with respect to endorsing, amending, otherwise commenting upon this multibillion-dollar nuclear recovery plan?

**Mr Macdonald:** Perhaps I could ask Dr Grant to respond to that one. But can I make a procedural point at the start? I was surprised that the Hydro board, I think it was August 16, announced as a fait accompli this very substantial plan.

I can say that if I were a director of Ontario Hydro, I would be looking to the shareholder to get some direction: "We've got a major problem here. How do you want us to handle it? What are your priorities?"

The minister, with the Lieutenant Governor in Council, and of course ultimately seeking the support of the Legislature, has a provision under section 10 of the Power Corporation Act where the government can issue policy directives to Ontario Hydro as to what the shareholders' expectation is in this regard. If I were one of the private citizens on the board, I would look to the government to say: "All right. How do you want us to run this thing and what are your objectives so that we can have some indications?"

You had the feeling that they were presented with a very difficult report and without a clear indication as to what the ultimate expectation of the shareholder was.

I suggest that you might want to recommend that the use of that power might be suggested. Having said that, on the substance of your question Dr Grant perhaps can help.

**Dr Grant:** As I understand it, Hydro has felt bound to continue its planning under the assumption that the Power Corporation Act would continue in force, which we all know it won't.

Going along with Don's view, which I share, if the government were to direct them to assume the environment of the white paper from 2000 onward and construct scenario planning in that light and then revisit the issue of how much to spend and in what form, of course Hydro would be entitled to come back to the government and say, "You'll have to tell us more about what kinds of financial resources we'll be given, and what kind of balance sheet can we assume to start with?"

It would not be in any way an easy exercise for either party. We're dealing here with huge imponderables compared to any time in Ontario's past. The prudent planner, I guess, under those circumstances says: "Don't make big commitments. Think out the implications of making commitments, but don't necessarily go ahead and borrow \$5 billion and spend it without having scoped further over time."

I suppose my inclination would be not to demand either of Hydro or of the government to try to settle things in, for example, early 1998 once and for all. Even there, we may want to temporize with the problem, understand it better and understand in particular better what will be the new competitive reality and who will be the other players who will emerge on the scene to share in supplying power to Ontario.

**Dr Carr:** I just have one comment pertinent to your first question and in part to Mr O'Toole. There is provision in the white paper for this interim market, 1998 to the year 2000, and I wonder what part that will be playing in the decision-making of Ontario Hydro with regard to exactly this issue. I would have thought a big part, frankly.

**The Chair:** Thank you, Mr Conway.

**Mr Laughren:** I don't want to embroil you folks in the politics of this place or of Hydro, but you weren't at all involved in the drafting of the white paper, were you?

**Mr Macdonald:** Not at all.

**Dr Grant:** Not at all.

**Mr Laughren:** On the three days or so before the decision was made by the Hydro board there was a letter that went from the Minister of Environment, Mr Sterling, which almost said what Mr Macdonald just said: "Be careful. Assess all the options before you do anything hasty." That letter went to them on the Friday and I believe the board meeting was on the following Tuesday. But the letter was never presented to the board until after they had made their decision, even though they had the letter.

I don't want to speak for everybody on the committee, but that has given some of us some real concern about the

decision-making process that was engaged in at Hydro. We're really struggling here — I think it's fair to say that we're struggling on a non-partisan basis — with where we go from here. What do we say to Hydro? They claim that they have to do these things, and very quickly. For example, Bruce A is scheduled to be shut down —

**Mrs Helen Johns (Huron):** The end of March.

**Mr Laughren:** — at the end of March. That's very fast. It implies also an endorsement of huge spending as soon as you start that process, because the new fuel is over \$2 billion of the total cost.

I have the feeling I'm making a speech here. That's not what I intended to do.

Given the very tight time frame in which we're operating, I'm wondering whether you have a sense of advice to this committee on what we can do to make sure Hydro is operating — and I'll be a little bit mean here — not in its own interests but in the interests of all the taxpayers of the province. Can you give us any advice, or is it too broad a question?

**Mr Macdonald:** What I was saying previously, when I referred to section 10, is I think the shareholder, the government, is going to have to lay on hands and make some of these blockbuster decisions for itself and for the province and then communicate them to the Hydro management and board.

From what I've heard, it sounds like a Hobson's choice that the board was faced with. Hobson, you will remember, was a stable-keeper who said, "You can have any horse you want in the stable as long as you take that one right there." That seems to me the kind of appalling choice they had back in August. I think it's just going to have to go back. To govern is to choose, and they're going to have to make some choices on this one.

As John has said, it's not going to be easy to make choices, because they're dealing with a moving field, but quite clearly, if there is going to be some substantial exposure of the credit of the province, then it has to be made at the executive level; it can't be left to the board.

**Dr Carr:** But I do think there are some immediate tests available. They don't take a long time to implement as tests. They are provided for in the white paper, which is this interim market. Ontario Hydro has gone out with requests for proposals for makeup power — I forget the exact terminology. The same thing could be done for capacity, which basically is offsetting the need to refurbish a nuclear plant as opposed to building a new one, as you suggested. That can be tested against the market and it does not take a long time to do that.

1630

**Mr Laughren:** But you're going to get short-term contract proposals, which will be very expensive, as opposed to longer-term. If you knew ahead of time, if you knew from the day you request the proposals that these could be long-term contracts, you'd get a different set of proposals coming back to you, wouldn't you?

**Dr Carr:** Oh, yes, but you're talking about a staged thing here anyway, so you're talking about the most immediate decisions, being March. Let's look at that one

first. You've still got the longer ones. You're not committing to a complete comprehensive plan of action; you're just committing to a plan with respect to that one expenditure, the most immediate one.

**The Chair:** Thank you, Mr Laughren.

**Dr Grant:** Just one more comment, if I may. There's a great temptation in cases like this to look to the protection of the sunk cost and to say, "We have here a big corporation which is the taxpayers' darling," or has been, and fail to think primarily from the point of view of the ultimate future consumer of electricity whose interests, in my judgement and I think the committee's, come first. Even though you might want, for instance, to pour money at Ontario Hydro Genco to give us the strongest possible balance sheet with which to face the vicissitudes, that might not be the right line to take in providing to other potential competitors the level playing field that would give Ontario ultimately the most competitive cost for power.

**Mrs Barbara Fisher (Bruce):** I was one of those very young employees at the time that you, Mr Macdonald, opened Pickering. So we seem to be seeing each other through history on a number of occasions.

I have a number of questions. I don't even know where to start. I've waited a long time for this day. I don't know how long we've been at this process, maybe seven weeks, but it feels like seven years some days.

I'll start by coming back to the financial picture issue. I'm a little bit discouraged to be hearing a trend change in our thinking, in our presentations at the table, on the acceptance that, "Well, somebody said that Bruce A is gone, so Bruce A is gone." I tend to be of a different opinion, yes, somewhat because I represent the community, to be very honest about it, but certainly in the bigger picture of Ontario Hydro, which I have viewed with extreme interest for 27 years now.

Let's talk a little bit about other means of financing. I know the corrective picture for Ontario Hydro, the Bruce site, is \$2.4 billion, the remaining outstanding funds to totally refurbish and operate four units. I know the replacement fuel cost alone, in the \$5-billion to \$8.5-billion investment, is \$2.1 billion. It is not making too much sense to me — I respect what you said, Mr Grant — to put at risk the asset value, in the short term maybe and probably forever if we take that jump.

I would ask you this: We did have a presentation with regard to other forms of financial input to this mess, and one was the privatization of the British system. We seem to have a reasonable approach being made by the workers of Ontario Hydro in wanting to open the door to some consideration for private equity in a public-private proposal. Would you think that might not be a good thing for Ontario Hydro to decide to study, to investigate and to economically test before they go ahead with the closure of any units at the end of March? If you were a member of the board of directors, is that not something you would be interested in having before you before a final decision was made?



**Mr Macdonald:** It certainly would be attractive if it was possible. I'd have to say that, as you know, the advisory committee recommended against privatizing the nuclear system. Certainly, the way my mind ran was along these lines: As I said before, it's in the first generation. One doesn't know if it's going to really last the 40 years that it has nameplate capacity. Second, every gram of spent fuel is still inside those reactors and we haven't yet developed a national policy to deal with that. Thirdly, there is always the problem of the catastrophic risk of something going wrong. It's less likely with regard to a CANDU than any other, but one has to bear that in mind.

The question is, if you were a private person coming in, wouldn't you discount the price at which you're requiring this substantially, and shouldn't the government say: "Listen, if that's all we're going to get for it, and ultimately if one of these events occurs we're going to be left holding the whole thing, we shouldn't sell it in the first place"? That's the hesitation I would have about a private owner coming in.

**Mrs Fisher:** Quite frankly, I fully support your comments, because I do not at all support the privatization of nuclear in Ontario. I never have and I don't imagine I ever will. There would have to be a very convincing factor that changes my mind.

However, I hesitate to think that private equity into it at this stage of the game, in joint ownership with the public-owned corporation asset, would be a wrong thing to be thinking about. These gas companies or alternate fuel companies, the alternate generation facilities that are being talked about, made it pretty clear to us in their presentations to this committee that they really didn't have an interest in short-term.

The makeup power — I agree those aren't maybe the right words, but the makeup power proposal that's out there right now isn't really whetting too many appetites because of the short-term connection to it, yet we have a very short-term three-month decision to be made. Maybe we're fooling ourselves a little bit to be throwing all our eggs in the other basket. Maybe we should learn from the past mistake and not have them all in one basket but protect the asset value.

One last question. Under the IIPA report, Mr Andognini identifies a human resource problem and poor decision-making of management in the past for the demise of the nuclear situation today. Do you believe that other workers from the British restructured program who are now unemployed but able to run a nuclear site — or possibly even the first choice would be the laid-off workers who maybe shouldn't have been laid off to start with, and then the British workers or American workers — could work hand in hand with the full nuclear recovery plan of Mr Andognini to keep the units alive that apparently still have a seven- to eight-year safety life left in them before retubing?

**Mr Macdonald:** It seems to me that to the extent that Andognini said he felt there weren't adequate management skills there to run it — and I think we should look for assistance in that regard anywhere —

**Mrs Fisher:** We should or we should not?

**Mr Macdonald:** We should. Probably the first step is to find the most capable and toughest executive we can find to put on top of the whole thing and endow that person with the responsibility of making it work and recruiting the help wherever he can get it.

On the final point you made, it's true there are some outstanding Canadians who in effect bought themselves out of Hydro in the past. Let's not be obscured by that contract. If we can bring them back and put them to work in the system they know best, then we should do that.

**Mr Conway:** I come back, gentlemen, to the here and now, because this committee and the government and the people are faced with some very immediate pressure. I think we'd all agree with you that Hydro finds itself in a very difficult situation, and I don't want to deny that, but we have a plan that's been announced. It commits the utility, which has a guarantee provided by the provincial government, to a \$5-billion to \$8-billion recovery plan. The plan is beginning to roll out, and some of it we've already talked about.

This is going to be occurring over the next few weeks and months. World leaders are going to meet in Kyoto to worry about greenhouse gases, sabres are rattling in the Middle East, and we're looking at a nuclear recovery plan here in Ontario as we embark on a major policy change in terms of the electricity sector.

I was going to point out that today's Ottawa Citizen has a very interesting editorial called "Stranded Taxpayers." It's a very good headline. If you were a taxpayer in this committee for the last five or six weeks, I think you'd get a very uneasy feeling about what you were going to be set up for.

**1640**

Also, if you were a taxpayer in this committee, the one thing you'd probably conclude, if you were a general citizen, is that any reactor that's going to be shut down for more than a few months in this environment is probably not coming back. I think that would be a very fair conclusion on the basis of a lot of the testimony we've been hearing.

I want to come back to the short-term squeeze. What do we do about a plan that was taken, as you said, Mr Macdonald, on one day in mid-August, a Hobson's choice, that's going to lay up seven reactors, that's going to commit us to multibillion-dollar purchases, direct or indirect, of some pretty controversial power? What do we do about that?

My concern, quite frankly, thinking about the stranded taxpayer, is that the combination of these current factors just has the potential to really hose the taxpayer. With a lot of good intentions — some corporate, some public, some private, some personal — the taxpayer could really get hosed in this.

I want you to help me with, for example, the lay-up of one third of that nuclear power capacity, all of which we're told can operate safely in the short term. One of the obvious things to me is, why wouldn't we look at saying on a short-term basis — all right, Hydro tells us they can't

manage the whole 19. I believe that. They probably can't manage the whole 19. I'm not convinced that they can't manage 14 or 15.

Part of me wants to say, with a tough mandate from the AECB, giving these reactors no more than a six-month recurring licence, let us, in the taxpayers' interests, if we can, keep 13, 14, maybe 15 of these 19 reactors operating for at least the next two or three years, assuming it can be safely done under the aegis of the AECB. When we decide to close these reactors down, to be fair not just to the utility but to the private market out there, they're gone. When they're down, they're gone and they're not coming back.

My second question in this connection is, surely the private market is going to be affected by the lay-up of seven reactors which most people will probably think aren't coming back, but surely the fact that they're laid up with some proviso that they might come back is going to introduce some real uncertainty into that marketplace. Tell me if I'm completely off the beam here.

**Mr Macdonald:** I'm sure that's right. I defer to Jan Carr, who knows the electricity market well. I guess I'd say, and here I'm an old House leader talking now, rather than your feeling that you have to determine once and for all by December 1, one of your recommendations to the government should be that the committee be reconstituted, either in this form or in another form — which in due course will receive the Power Corporation Act, I presume, when it's brought forward — to continue to wrestle with this issue. As John Grant has just said, I don't think you should feel compelled, nor should the government feel compelled, to solve all the questions to the year 2025 at this particular point. The facts are going to change.

**Mr Conway:** But my immediate concern, Donald, is the seven reactors, because I believe if we shut them down, they're not coming back.

**Mr Macdonald:** My guess is that they probably are not, but I'd have to defer to Andognini and what he had to say on that, and you're more familiar with that than I. Jan or John, do you —

**Dr Carr:** I keep harping on it, but the market test is there in the interim market. I'm not sure it's an all-or-nothing thing. Your earlier question concerning the involvement of alternative capital things is certainly there. As I read the white paper and government policy, there is nothing preventing the British nuclear operators from submitting perhaps an unsolicited proposal to Ontario Hydro to come in and assist them with keeping reactors on line rather than laying them up.

**Mr Conway:** But my concern, quite frankly, is that by the time this or any government gets around to deciding some of the questions in the white paper, to get the legislation in place, the utility may have decided a number of questions, effectively.

Again, I come back to these reactors, because they are a substantial problem. If I'm thinking about stranded debt, stranded assets, stranded taxpayers, boy, I've got to be concerned that if they're down, then a very important — and it may be that the AECB is also going to say they

can't run safely. I'm not convinced of that. The AECB has told us that they can operate safely. Hydro has made a strong point that they don't feel they have the manpower. But I have to think that because they've got a provincial guarantee for what they're doing they're not going to be particularly concerned about financial considerations, because at the end of the day they know they can pass that bill back to the Minister of Finance for Ontario.

**Dr Carr:** Then the real issue there is, is the new spending to bring these reactors back subject to the provincial guarantee or not? That, to me, is not clear from reading the white paper.

**Dr Grant:** I think we've said already that this is a bad time to be making large, irrevocable decisions. We don't know the technology, among the three of us — Jan knows it. But I would certainly feel uneasy if the taxpayers were being committed to huge decisions which in the light of future evolution might look to have been the wrong decision.

**Mr Conway:** One of the interesting things in recent days is, I've been struck by the fact that the chairperson of Ontario Hydro — undoubtedly with his view about the corporate agenda of Hydro as his primary concern, and that's not unreasonable — has made it clear that he's concerned about some of the decisions made in the white paper.

He's made it clear that he doesn't agree with a couple of important decisions that underlie the white paper. That gives me some concern, not that he's not acting in the best interests of the corporation, but that since the shareholder has a real interest — as Mr Laughren I think pointed out in his questioning, it struck a lot of us in this committee, particularly those of us who have had some cabinet experience, that a minister's letter of the kind Mr Sterling wrote on August 11 would have gone to the corporation, and the board didn't really look at that letter until after they made a decision in principle that committed them to this multibillion-dollar recovery plan.

That's the background. Now we know the government has decided — a white paper, a lot of ingredients of which I think all of us like, but we now know that the president of Hydro does not agree with some of the key issues. I'm very concerned that in this intervening period, and it's going to be more than a few weeks and months, some other decisions will be taken by the utility for which there will not be good oversight and for which there will be substantial consequences downstream to the provincial taxpayer.

I guess what I come back to is I'd like to be in some kind of a position to recommend something specific about maybe putting some reasonable brakes on that without wanting to be mischievous or irresponsible.

**Mr Macdonald:** I think the legal instrument is there to do it and I think the government has got a tough decision to make as to, as shareholder, what it calls for in the short run.

**Mr Conway:** Is there a concern —

**The Chair:** Thank you, Mr Conway. Mr Laughren.



**Mr Laughren:** There are a couple of things I want to get at. One is this whole idea that Mr Conway is getting at, I think, and that is government actually moving in and saying, to use my words, no one else's: "Hold the phone. We know what you want to do. We've seen your recovery plan, but now you've seen our white paper. We think there's a new world on the horizon out there and we want you to either go back to the drawing board with the new plan or tell us that that's our responsibility." Would you have any trouble with that kind of recommendation?

**Mr Macdonald:** I liked the first part of it. If I recall, Hydro spokesmen have said in these hearings and outside, "We're waiting for the white paper." They've got it now. They know what the future's going to be, and I think it would be very fair for the shareholders to say: "All right, we've sketched out the future. We can't indicate all the possibilities of it now within that future. How would you propose to address the question now?" The implication being of course that, "Unless you really work at it, then we'll work out a recovery plan and we'll direct you to do that." I don't think that will be necessary with the people involved, but I think it is, as you suggest, fair to go back to them and say: "This is going to be the new environment now. Faced with the problem we share, how would you resolve it?"

1650

**Mr Laughren:** Thank you. Because the committee members have made a determination — among ourselves — that we're going to complete our work in another week or so, by December 1 anyway, we will not get into the white paper. We may comment on it and so forth, but we're not going to analyse the white paper. We didn't get it until it was released and we've already done most of our work.

One of you, I think it was Mr Macdonald, made the comment that perhaps the committee could be given a second mandate in the new year to proceed further. I don't have any problem with that idea, but my problem is — maybe I'm unduly worried about the time frame here, and I'll tell you what I'm worried about — I'm worried about Hydro moving forward and saying: "We served notice what we were going to do. We did that through our recovery plan. We have heard only from the select committee, which doesn't have the authority to tell Hydro what to do. We report to the Legislature as a whole. We don't even report to the Ministry of Energy." That's my concern about the time. You seem to think or seem to imply, "Don't worry about the time." But I sure do and I wonder if you could comment on that?

**Mr Macdonald:** I guess maybe in what you said you've just written one of the recommendations, namely recommending to the government that they should be prepared to exercise their directive power and say: "We've got a new environment here now. Come back and tell us how you'd do it."

**Dr Grant:** Just again though to reiterate that the government can't simply go with what's in the white paper and say, "Come with a plan," because any responsible financial planner in Hydro would need to know things

like, "How much can we borrow and will we have to borrow on our own recognizance?" Presumably yes, but how much equity will the government be prepared to put in? Those are questions which in effect represent a give and take between the shareholder and the corporation.

**Mr Laughren:** Why would they have to put equity in?

**Dr Grant:** Because Mr Conway just said that 97% debt doesn't sound very good etc.

**Mr Laughren:** Oh, I see.

**Dr Grant:** It's not a question of the government saying, "Come back with a plan and we'll vet it." It's more a question, "We'll get into working out a new and more appropriate plan given the atmosphere that we're setting up with the white paper."

**Mrs Johns:** I want to start by talking about the white paper. As I read through your report again last night — I skimmed through your report because I've only had last night again to look at it — there were a lot of similarities between your report and the white paper. I suppose you think it must have been a pretty substantial base to the white paper. You're obviously pleased about that, Mr Grant. I guess I want to ask you, were you surprised by the acceptance of the white paper when it was announced last week or the week before? Were you surprised that there was so much apparent acceptance throughout the industry and in Hydro and other areas for most of the issues?

**Dr Carr:** I can speak to that and say absolutely not. The industry has been waiting very anxiously for the white paper and has been, from my discussions, very much coming around to consensus on the recommendations of the Framework for Competition report; therefore, I would have expected the similarity would have been received very favourably, as it was.

**Mrs Johns:** One of the things that I'm most concerned about, and it hasn't been raised today, is that the committee has been startled, I think would be the best word, by the lack of controls that Ontario Hydro has had over the last 10 or 15 years. I think we assumed that the Atomic Energy Board and the Ontario Energy Board wielded a little more power over them and we have seen years and years of unfulfilled deficiencies, if you will.

Yesterday the gentleman was here from the American regulatory body and he suggested that we needed to impose teeth, if you will, with the Ontario Energy Board and he suggested that we needed the following teeth: that the Ontario Energy Board needed the ability to shut down a plant if they felt there were substantial deficits, that they should have some venue to be able to criticize both the private and the public firm publicly, and to fine it. Have you got any other recommendations about what teeth you think the Ontario Energy Board should have if we were to give it more strength?

**Dr Carr:** The Ontario Energy Board as envisioned in the white paper I think is a very good model. It basically has veto power over the policies, decisions and actions of a number of entities, not just Ontario Hydro or the generators but also the operation of the independent market, and in fact particularly the operation of the independent

market. I think ultimately it is the final court of approval on the way the industry shall be working. I'm not sure whether that constitutes teeth. To me, it sounds pretty vicious.

**Mrs Johns:** Do you agree with the other things that he suggested? For example, do you think they should have a right to state publicly criticism about any public or private firm? Do you think they should have the ability to levy fines?

**Dr Carr:** I really haven't given that much thought. I would observe that the American regulatory environment is entirely different from the Canadian regulatory environment and therefore some of those measures may not necessarily be appropriate in Canada, let alone in Ontario.

**Dr Grant:** If we go back to the issue that was raised before about how realistic it is for AECB to issue a stop production order when you're relying on that power for so much of Ontario's energy, if the newly constituted board were to have teeth that would bite but wouldn't hurt the consumer, you'd have had to already set up sufficient alternative sources of supply. That stricture would be perceived as one that they could undertake without putting the consumers at risk.

**Mr Macdonald:** I guess I'd have to say that in the national gas business, both in terms of long-distance transmission and local distribution, there are tribunals in existence which are effective. They don't have to levy a fine or put somebody in jail in order to get their recommendations covered. So I don't think that's been found to be necessary. If you've got that mandate in the market, then the market players will respect it.

**Mrs Johns:** I differ from my colleagues in one issue that they've been talking about, and I think I've been consistent throughout this. My major concern, and I think everybody's here to start off with, is that we're very concerned about safety in this industry, and I think you state that very clearly in your documentation too.

My concern is if we start to micromanage what Hydro thinks is an acceptable solution — they have come up with lots of plans over the last 20 years on how they're going to fix all these deficiencies and yet as they come through the process, they never seem to be able to put the nails in the coffin or close the deal or get the thing done.

Everybody's got great ideas over at Hydro it seems, but they can't seem to get this done. They once again have a plan and of course we're all concerned about if they can get this done. But on the other side I have some concerns about micromanaging the issue, just in case they can get it done. I'd like to set some benchmarks to ensure that they do work through that process, but I think for once here they have a lot of public scrutiny, they have a lot of reason to make this work because of the competitive market.

Honourable Mr Macdonald, you've been around Hydro for a long time through your history in politics. Can you talk to me about the micromanagement of this system or their inability to do things in the past and maybe our concerns in the future, or is that too provincial and not federal enough?

**Mr Macdonald:** I must say that I can't really do that. I read with interest Dr Kupcis's testimony to this committee. Dr Kupcis was very helpful to us and I've got great respect for him. He did refer to the psychological element — the Greek word is "hubris" — that they'd had such success that they didn't listen to anybody else or, as a matter of fact, pay very much attention to what they were doing. That is a problem with any management.

I don't think we would want a regulator to get in there to micromanage it. Ultimately, you've got to set some fairly broad targets that you expect from an industry, and if they're not getting it, then you act against them in the broader sense but not on questions of detail, even with regard to a particular reactor.

**1700**

**Mrs Johns:** I think almost every board member who has come in has said that this is a flexible plan, that they are going to consider the government's white paper, they're going to look at the changing marketplace and with that they are going to make decisions along the line — in fact they believe they left us with a flexible enough plan, that they considered what the minister had said in his letter of August 11.

From an engineering perspective, Mr Carr, have you considered the NAOP and have you considered the opportunities to change that where something becomes irreversible along the line? Have you thought about that at all?

**Dr Carr:** No, I haven't. I haven't looked at it in any detail. Back to your comment about micromanage, I would forbear from making any comment of a micromanagement nature on that plan. But I do think that there are some obvious generic issues in any planning exercise of this sort, and they have been raised already this evening. There are some big decisions which become irreversible, but there are some other decisions which can be staged and leave open a number of options beyond them.

I would be focusing on the first action in the plan. Let's forget the end of the plan for the time being. Let's look at the first action on the plan and see to what extent that absolutely has to be made and everything else hinges on it, and what the options are for it in terms of buying more flexibility for the next action on the plan and so on. By the time you've got down into the plan a little way, you perhaps find that you are not constrained to the point that you presently feel you are, standing at the starting line.

Again, these are just very generic comments about planning. They're not intended to be either a critique or endorsement of the particular plan that's been put forward. I'm not dismayed by the timing, frankly. I think there are some things that can be done.

**Mr Kwinter:** I just want to follow up what we've just been discussing. The perception I get from listening to Mr Macdonald and Dr Grant is that at the present time — and also from the chairman, Bill Farlinger — there really is a Hobson's choice. There's just too much dependence on nuclear. We've got too much money invested in it. Whatever the solution is, nuclear is going to be a major part of that solution.



Having said that, I queried a couple of the members of the board about when the minister sent his letter and said, "I want you to consider all options." I asked them if that meant all options or all options presented by the Andognini team where there were six options. They said they were only addressing the options that were presented to them on the nuclear recovery. So that leads me to the problem, are we in fact dealing with a done deal?

My question to you is this: Do you think in order to open up the potential for options that it might be feasible, taking from the white paper the suggestion that we have an independent market operator, and there is an entity like that at Hydro right now that operates, to pull them out right away and get them out there really plumbing the market so that you know in what kind of situation you can be and make decisions based on actual information as to what's available, what are the implications for the environment, cost, transmission, all of those things, and that would in fact give us a very, very essential tool in which to make additional decisions?

**Mr Macdonald:** It's going to take a little time to set up. As you know, the structure already exists within Hydro and so it's not as though you had to recruit and invent it. It can be just moved over and under a different form of public ownership. There's going to be a little running-up time to find out how you run the physics of the system independent of the generator, which have always been close to the generator in the past, work out how a market operates in Ontario. There's going to be a little running-up time on that one, so it's going to be difficult to do anything immediately.

I think that if the chairman of Hydro said to me, "Listen, you were talking about bringing in, for example, other sources of supply. It's unlikely you can do that in the two years that remain anyway," I'd agree with him. But I think they should work with all deliberate speed to try and get the new structure in place so that the market opportunities can come in and so that the people who are prepared to risk some money will know that they can come forward and they've got a new system in place and they can come up with some options.

I think that's what Mr Carr's approach advantage is. As time goes on and you're going to come into a competitive market, some players may appear that you hadn't thought were out there. There may be a lot more players out there who are prepared to offer alternatives to refurbishing, some at least in the nuclear plants.

**Dr Carr:** Could I just make a comment on that too? I do believe that the white paper has almost done what you've suggested or at least it has the framework there to allow that to happen almost as you suggested. The only difference is that this is the interim market yet again. The arbiter, if you will, or the purchaser in the interim market is within Ontario Hydro and not a separate entity, whereas in the fully competitive open system, obviously it is a totally separate entity. The reason for the separateness ultimately is that you've got multiple purchasers and multiple sellers, but in the interim you've only got one purchaser and you're dealing with multiple sellers.

Frankly, the complexity in moving to the longer-range one in a very short time frame is quite substantial.

I think the proposal made in the white paper is very good structurally. I think it gets as much going competitively as you possibly can, as soon as you can.

The concept that the single purchaser should not be Ontario Hydro but should be an external agency, which I think is the point you're making, would not be a steep climb from the position taken in the white paper. That's an organizational thing, not a technical thing. That would be feasible. You'd have to look at that in terms of whether it offers greater confidence to people selling into the market, that the single purchaser is truly independent of Ontario Hydro as opposed to being Ontario Hydro itself.

**Mr Laughren:** I wanted to ask you about the stranded debt. The white paper left me unsatisfied. That's not a new phenomenon in my life. I couldn't get my mind around what they would do about electricity that came in from Quebec or the States, for example, or what you do about self-generation if Chrysler set up its own generating station, or Inco or whatever. How would you come out with a fair balancing of stranded debt charges here so that some people weren't getting away with not having to pay their share while others paid too much?

**Dr Grant:** Our proposal, as you know, suggested that the stranded debt should be estimated and then, in the context of a level playing field and the use of payments in lieu of taxes and so on all being funnelled to retire outstanding Hydro debt, there would still be some left over that had to be basically amortized. We suggested doing that over a seven-year period, but that would depend on the reality of the time.

We still believe that the principle there, which was to share those costs equally across all Ontario consumers of power, wherever they bought their power in Ontario, is the proper way to go. Once the government has decided what the break is between taxpayer support of that debt and electricity ratepayer support, we're on record as saying that all electricity consumers, whether they are generating a good deal of their power themselves or whether they are buying from the grid, should be required to pay that down.

**Mr Laughren:** To pay into that fund.

**Mr Macdonald:** Including of course power that came from outside the province; it would have to bear part of the freight too.

1710

**Mr Laughren:** The people who pay a charge in lieu of taxes, doesn't the municipality get some of that? I should know that.

**Mr Macdonald:** You're talking about a different question, I think, the taxation question as opposed to the stranded debt charge.

**Mr Laughren:** No. I thought there was a link here between the grants in lieu of and the stranded debt charge.

**Dr Carr:** The province perhaps contemplated intercepting the grants in lieu and applying them to paying down the debt.

**Mr Laughren:** Exactly. The government would dedicate all the new payments in lieu of taxes to paying down stranded Ontario Hydro debt.

**Dr Grant:** Which would reduce the other charges they would have to levy, then.

**Mr Laughren:** Right. So where would the municipalities stand?

**Mr Macdonald:** I think it's fair to say that the Municipal Electric Association isn't delighted with that suggestion, but it's not an unreasonable one.

**Dr Carr:** It is a status quo suggestion, financially. It doesn't rock the boat.

**The Chair:** Mr O'Toole. May I suggest this is the last round now?

**Mr O'Toole:** Yes. I'm going to share a brief comment and then ask a brief question or ask an opinion.

**The Chair:** That's all still within the same time frame.

**Mr O'Toole:** Yes. We've used most of it now.

**The Chair:** Then I've done my job.

**Mr O'Toole:** The reference you made philosophically to Hobson's choice twiggled an interesting little story in my mind. I remember the Hobson axiom of equality. I put it to you that it's an interesting little challenge, because it says, and I'm going by memory, that seeing something wrong for a long period of time gives it the appearance of being right. I put it to you that the Ontario Hydro example is a clear example of, "Well, what else can you do?" It's my observation of another application of Hobson's principle, if you will. That's for the record, primarily to contribute like Mr Conway's often eloquent remarks. I'm learning as I go.

**Mr Conway:** Flattery will get you everywhere.

**Mr O'Toole:** We've heard from many of the alternate suppliers or potential suppliers that the combined-cycle gas generation is really, if you're looking at a purely economic model — no choice. In your framework for competition reference, would you have come to that conclusion?

**Mr Macdonald:** Yes. The economics of the system have been well proven. One of the best pieces of evidence that it's a good and competitive system was the enthusiasm of Hydro to cut off any further plants of this kind, because they were too competitive with the existing supply.

**Mr O'Toole:** You're on the board of directors of TransCanada PipeLines, as you said in your earlier comments. What is the future market or the life supply-side for natural gas? I've heard 500 years.

**Mr Macdonald:** I'm not sure. I wouldn't say that for the western Canadian sedimentary basin. I think by the middle of the next century the western Canadian basin will be like the western Ontario basin is now; the gas will have substantially been produced. But it will still be a very important basin because of the oil-sands. Assuming that hydrocarbons are still being used, it will still be important for that reason, but the gas has a finite life.

**Mrs Fisher:** I'd just add to that a little bit, because I'm on the gas line, if you will.

**Mr Macdonald:** I wish I was.

**Mrs Fisher:** I'm actually trying to get out of it. I find it interesting that that lifeline is about the life of a nuclear site if it was properly maintained and with a renewable resource.

For a long time, I have understood the value of nuclear energy and the non-polluting environmental aspects of that type of electricity generation; it's one of the major reasons, by the way, why I support it so strongly. When is the right time for Canada to get its act together and impose the same type of expense, if you will, to offset the decommissioning and long-term, high-level waste storage costs and equate that and make a playing field that's a little bit fairer, anyway, in terms of a carbon tax? I hear them continue to go on and on, from 1987, at minimum, on. We have our Prime Minister going to a conference.

**Mr Macdonald:** I won't comment on the carbon tax. When should we have been setting funds aside to provide for decommissioning? I think the right time to do that was 1975. I went to cabinet, to Treasury Board, with a proposal for atomic energy in Canada to embark on a program in that regard, and my colleagues didn't go for it. Their myopia in that regard has been shared by Canadians ever since. It's something we should have done a long time ago, and we still haven't come to terms with it.

**Mrs Fisher:** Should we be doing it with a carbon tax now too, though, to level the playing field? If we're going to compare our sources of competition, then there has to be a level playing field. Without the carbon tax or some other type of imposition as to the other major alternate producer, how can you call it level? How can you even make an economic decision?

**Mr Macdonald:** I would hate to be the federal politicians who have to go to the other parts of the country that don't have nuclear power and say, "We're imposing a carbon tax in order to pay for Ontario."

**Mrs Fisher:** Why?

**Mr Macdonald:** I wouldn't be prepared to take that grief.

**Mrs Fisher:** But if we consider Ontario Hydro to be an economic engine for Ontario, just like oil is for Alberta, why not?

**Mr Macdonald:** Well, you can put additional tax on at the pump and at the gas pipe, but a carbon tax is talked of primarily at the producing end, and I don't think that one would be a starter.

**Mrs Fisher:** But does it not have the advantage, on a competitive basis, of being able to use a transmission corridor that has been paid for by another generation industry? Where has it ever paid its way in that?

**Mr Macdonald:** I'm sorry?

**Mrs Fisher:** When you get into the transmission system side of it and you don't pay any surcharge for not having paid for the construction of that as an industry, where do you get the level playing field in competition of pricing then?

**Mr Macdonald:** Do you mean as between natural gas and electricity?

**Mrs Fisher:** Well, in the distribution. If you gas-fire and you burn and you transmit over the transmission



corridor that Ontario Hydro has as part of its debt on the books to date, at what stage in the game does the gas industry pick up their share of that outstanding debt to the Hydro books to level the playing field, either through a carbon tax or a surcharge for a new type of user?

**Mr Macdonald:** It's at this point I defer to the best economist I know.

**Dr Grant:** With all respect, we are dealing with two different problems. In the case of the decommissioning charges, we're really trying to establish, through accounting procedures, the appropriate level of income to take from that resource. In the case of carbon taxes, we've got a global issue of environmental sustainability. All hydrocarbon producers ultimately would have to be faced with whatever regulatory structures, but it's not a question of their accounting for their own operations, whereas in the case of decommissioning costs, it is a question of appropriately accounting for costs which ultimately they should bear, having been the producers.

**Mr Conway:** I just have two questions, both for Mr Macdonald. But before I begin I've got to say that the part of that answer about "Their myopia has been shared by many Canadians since" is probably the most clever answer provided in this committee. I can imagine how that committee with Mr Macdonald and Mr McKeough operated for those many weeks and months. It must have been a very entertaining and interesting place to have been.

Donald, I've got two questions to conclude with. The first question is on the competitive marketplace. One of the assumptions that has been widely advertised and embraced by many is that we're going to move into electricity reform, we're certainly going to be looking at places like Ontario, we're going to break down big, state-owned enterprises, big public monopolies, and we're going to have a much more dynamic market, a much more competitive market, with real and measurable advantages to consumers of all kinds, because it's not going to be monopolistic. That is a very compelling advertisement to people in the 1990s.

When I look at the United Kingdom, when I look at parts of the United States, it's not always evident to me that we're going to get all of those advantages. In fact, some people would look at the United Kingdom and parts of the United States and say, "Are we on the verge of or do we risk simply trading a big, clumsy, state-owned monopoly for one or two aggressive, private sector, privately owned monopolies or near-monopolies?" What would you say?

1720

**Mr Macdonald:** It's a reasonable expectation that a lot of players will come into the market to acquire the commodity in one way or another and to sell it in competition with each other. That has emerged in the natural gas markets, and I can't think of any reason in principle why it shouldn't emerge with electricity as well.

**Mr Conway:** But the Major government in Britain just a year and a half ago had to intervene in fairly short order by cabinet directive to stop consolidations in the utility

business that were certainly not being advertised as either likely or desirable.

**Mr Macdonald:** I would agree with that. There would have to be scrutiny. Again, this would be a role for the Ontario Energy Board, to make certain, for example, that a generator didn't get control of the distributor; in other words, to exercise competitive surveillance in that regard.

My recollection from the testimony we heard with regard to the United Kingdom example, and I was actually in Britain for part of the time it was occurring, is that when the systems were sold to the private sector they were underpriced and the purchasers picked up a windfall there. Naturally the customers felt they should have gotten some of the windfall; other taxpayers felt they should have got that. I think they would say on the whole that now electricity is coming at lower rates than it did before, with the old coal-fired system, and they are relatively satisfied with that.

I don't think the system in the United States is as far ahead as so many commentators say it is, but I think there is that prospect as well of having much cheaper power.

**Mr Conway:** My final question concerns something really basic. The poor staff on this committee have heard me rant and rail about this. I read your report, I read the white paper, I read financial press, and one of the things that strikes me is that, particularly in the Canadian context, there is a discussion now about energy, about electricity, that's just wonderfully antiseptic, as though it's a commodity *comme les autres*, there's really no difference. In fact, I must say the Black press in the national capital in the last couple of days is full of all of this stuff. Andrew Coyne is telling us today it's really no different than anything else.

I may be just old-fashioned or just highly idiosyncratic, but it seems to me that electricity specifically and energy generally is about as politically sensitive a commodity in a country and a province this big as I can imagine. When I think a little bit about the recent past and look at the future — as I mentioned earlier, we've got Kyoto coming up. That's going to be very significant around greenhouse gases. Every day you read about the Middle East, and that's not just about some peoples that don't get along. We westerners have a vital energy interest in that part of the world. I read all these reports. The politicians are never going to be faced with some of the political dimensions of electricity and energy.

As a former Minister of Finance and a former Minister of Energy, particularly thinking about the Canadian context, how energy, for example, speaks to one of the most divisive cleavages in our political culture, regionalism — I've talked to you about hydro-electric plants in my part of the world. Do you know they are anchored in Quebec? If you want to sell the Ottawa River power plants, somebody better be talking to somebody in Quebec City, because the Quebec issue is going to be part of that commercial transaction. Let me put the question. Do you have anything to say to the committee about some of the traditional and ongoing political sensitivities that attach to the energy and the electricity question and how we might think about that

in terms of this brave new world that's about to dawn upon us?

**Mr Macdonald:** I accept your characterization that it is a commodity different from others. It's different, for example, than telephone services. Life is dependent, in our climate, on the availability of energy: oil, natural gas, propane, electricity. For that reason, this remains a sector where there is an element of regulation still by government, where there isn't for so many other commodities. It is vital to the community, and therefore there does have to be public surveillance on it, where there is not public surveillance on a lot of other commodities.

**Mr Conway:** As a practical matter — and I'll end with this. As I was saying to Floyd here a few moments ago, I can imagine a situation where the Acme Power Co is providing electricity to the city of Thunder Bay and something just goes wrong with the Acme Power Co — trouble in the bond market, whatever — and there are some transmission difficulties. Theoretically you might be able to get replacement power there. I just worry that some politician someplace — it would probably be the first minister; it might be the Minister of Finance; it will certainly be the local member. It will happen on a January afternoon when the announcement is made that Acme Power is just not going to be able to do its duty. All of the arguments are well put about the marketplace and the regulator, but the reality is, on a cold winter day something goes awry. I'm just very anxious to get as much comfort as I can that no politician will ever be confronted with these kinds of nasty little political problems that sometimes pop up.

**Mr Macdonald:** If there's an effective market working, then from a supply standpoint, the failure of Acme Power, while regrettable for its shareholders, will not be fatal to the customers. In terms of distribution, obviously there is an important concern to make sure that the gas pipe doesn't blow up or the transmission line doesn't blow down. That's why there's greater surveillance in that area. But in terms of the actual supply of the commodity, to borrow a phrase from another context, we're asking for a leap of faith that indeed a market can develop here for this commodity as it has for natural gas, and in the long run we won't get the enormous cost overruns that we've had under the previous form of organizing the industry.

**Mr Laughren:** I'm a little bit better prepared to accept this leap of faith than I was the last one.

**Mr Macdonald:** I'm not surprised to hear you say that.

**Mr Laughren:** You'd be disappointed if I didn't. I just have one question, and it has to do with a new Ontario Energy Board, call it whatever we will, and to what extent it needs interventionist powers because of the new regime with the private sector and importers and what have you. Where would you draw the line on that? I was trying to picture the energy board. Most people now feel that the Ontario Energy Board doesn't have enough power. I think most people feel that, that it doesn't have the teeth it needs to have. I don't know how much power you give it. We've

got the AECB on the safety side. What would you give the Ontario Energy Board to do under the new regime?

**Mr Macdonald:** The first important area is where you have the so-called natural monopoly, as the economists say, of the local distribution lines or the long-distance transmission line. It's a monopoly because nobody is going to build two or three other lines down the same street. It's there, so the board will have to regulate the costs of that so that the de facto monopolist doesn't take advantage of that. That's the first area.

The second area is the one I referred to in the early part of my remarks, and that is to say that where you have one very big player out there who's capable of gaming the market, of influencing the market, then the board is going to have to play some of the same functions as the competition policy bureau does in Ottawa to make sure that scale is not being unfairly used. That's something that wouldn't arise if you had an evenly balanced market with a lot of competitors the same size, but it does arise in this particular case.

I'd have to defer to Dr Carr, because there may be other technical reasons why the board from time to time will want to come in. For example, the white paper talks about the board having an oversight on what the independent market operator does.

**Dr Carr:** I'm not sure exactly, but the broad principle requires that the Ontario Energy Board be vested with ensuring that there is a market where a market is supposed to be, and where there isn't a market, that things are behaving in the public interest, very broadly speaking. The monopoly, one, is there.

1730

The natural gas industry is already very much in the mode that we're talking about the electricity industry being in, with regard to the Acme Gas Co failing to supply on January afternoons. Those issues have been dealt with. I would anticipate a symmetry there between the regulatory powers the OEB has on the gas side and those that it should have on the electricity side.

**Mr Laughren:** You wouldn't intervene, would you — or would you? I don't mean to put it in that way. If you had a co-gen plant here, a nuclear plant here, a fossil plant here and a gasoline plant there, would there be any need for the Ontario Energy Board to step in with regard to prices or would you let that co-gen plant, obviously much more efficient, sell electricity at their rate?

**Dr Carr:** The short answer is that you'd let the market sort that out. There might be some extenuating circumstances, probably mostly relating to when you've got artefacts from the past. In other words, we're coming from a centrally planned model, where things were put in locations for central planning reasons, and now you're moving to a more diverse situation, and so you will have some anomalies over a period, possibly decades.

**Mr Laughren:** Could I ask one final question, Mr Chair?

**The Chair:** Dr Grant wants to make a response as well.

**Mr Laughren:** Okay.



**Dr Grant:** Just quickly, in the regime we've all been used to, there's an obligation to serve. With the particular form of regulation of Ontario Hydro, we've got used to what we consider gold-plated service levels. In the new regime, someone will have to decide how much transmission to provide and how much generation is sufficient to meet the reserve requirements from day to day, and individual producers will not take that responsibility on themselves.

I think the market design committee of the new, independent system operator will have to think long and hard about how to set those new rules, the ISO, and then the OEB will have to have some kind of watching brief which it shares with the ISO as to what levels of reserve capacity for both generation and transmission will be the levels that Ontario consumers should feel they can count on.

**Mr Laughren:** Would you see it as beyond the mandate of the OEB to intervene, for example, if they shut down Bruce A and/or B, because of what it does to that community? This is broadening the debate a bit here, but that really would have a massive economic impact on that community. Would you go so far as to say to someone bidding, "Look, we need electricity. We want you to bid, but somebody is going to have to go to Bruce"? The transmission facilities are there, obviously. Somebody is going to have to go there. If they want to get in on this, they're going to have to be responsible partially for the economic viability of Bruce county.

**Dr Carr:** My general reaction to that is, that's not the mandate of the OEB. But my guess is that the skilled workforce there, the energy delivery infrastructure there and all sorts of other things would act very much in favour of indeed a replacement facility being located there.

**Mr Laughren:** But basically that's leaving it to the market.

**Dr Carr:** Leaving it to the market.

**The Chair:** Mr Macdonald, in response to a question near the beginning of the testimony, you ruminated about how well you had worn. Did you wear as well as the reactors or not? At least from this Chair's point of view, you have worn exceedingly well.

**Mr Macdonald:** Thank you very much.

**The Chair:** One might only wish our reactors had worn as well. We thank you very much for your testimony and for attending upon this committee. For the small part I might add, on behalf of this committee I want to thank you for the contributions you've made on this important issue. We thank Dr Grant and Dr Carr for attending with you today and for their testimony. If we have further information that we require, I know you'll respond very quickly to our requests.

**Mr Macdonald:** Absolutely. Thank you for the opportunity to appear and talk about it.

**The Chair:** It's our great pleasure. You're excused. We thank you very much.

For members of the committee, may I quickly remind you that we will be leaving here shortly for a division of the House, I think, so we'll be watching for that.

In terms of the agenda for tomorrow, may I make sure that you're up to speed. At 10 am, or 1000 hours, we will meet with the Ministry of Finance. The afternoon session will begin with the McGill University presentation, which will be followed by the Ministry of Environment and Energy. That will be here in the afternoon.

For Monday, we conclude witnesses, and that will include Ms Clitheroe, Mr Farlinger and the consortium. That will conclude the witnesses for the committee on Monday, and we will proceed then with completing the writing of the report.

The committee should feel some degree of pride that it is able to meet the deadline given to it by the Parliament, and we should be able to report out on that date. Mr Vice.

**Mr Kwinter:** I just want a clarification. On Thursday afternoon, when we have the Ministry of Environment, does that mean we are not having a representative from the federal Ministry of the Environment?

**The Chair:** I don't think we've been able to get anybody yet from it.

**Mr O'Toole:** I appreciate, respectfully, that the Vice-Chair would be recognized before I, even though I had been recognized.

**Mr Conway:** Seniority.

**Mr O'Toole:** It's seniority, and I appreciate that. My point is, for the record, I'm rather disappointed, and this is extremely sincere, that we have not visited Darlington. I would direct the Chair to make sure that happens, at the convenience of the committee.

**The Chair:** May I point out to you, Mr O'Toole, we are going there next Thursday morning.

**Mr O'Toole:** Good. For the record, you've clarified that.

**The Chair:** I only assume that something happened between yesterday and today and you forgot.

**Mr O'Toole:** You presume the worst. Is the glass half full or half empty?

**The Chair:** We will nevertheless be there. The lead of the government caucus has been at great pains to ensure that we are there, and out of great courtesy, we should be there. It will be our pleasure to be there, as many of this committee as can be there.

Is there any other business? If not, this committee will stand adjourned until 1000 hours tomorrow morning.

*The committee adjourned at 1737.*





## CONTENTS

Wednesday 19 November 1997

Advisory Committee on Competition in Ontario's Electricity System.....	H-573
Mr Donald S. Macdonald	
Dr John Grant	
Dr Jan Carr	

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H-20

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## LEGISLATIVE ASSEMBLY OF ONTARIO

## ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

SELECT COMMITTEE ON  
ONTARIO HYDRO NUCLEAR AFFAIRSCOMITÉ SPÉCIAL DES AFFAIRES  
NUCLÉAIRES D'ONTARIO HYDRO

Thursday 20 November 1997

Jeudi 20 novembre 1997

*The committee met at 1001 in room 151.*

**The Chair (Mr Derwyn Shea):** The standing committee will come to order, please. We are just a few minutes delayed but have been asked to proceed, and we will do so in order to keep the affairs of this committee on schedule and conduct our business in a timely fashion so we can report out to the Parliament, as we are instructed to do by December 1.

You will see that Donna has changed her apparel, and she has renamed herself Todd, so don't be surprised if her voice has deepened over the next few minutes. Welcome, Todd. Nice to have you at the committee.

## MINISTRY OF FINANCE

**The Chair:** Our business for this morning involves the Ministry of Finance, and I'm pleased to have Mike Gourley, the deputy minister, and other members of the ministry with him. As we have done and will continue to do today, presentation followed by caucuses asking questions in rotation. For information, we will begin the questioning this morning with the official opposition. Mr Gourley, if you'd be good enough for the purposes of Hansard to introduce yourself and those at the witness table, we'll proceed. Welcome to the committee.

**Mr Mike Gourley:** My name is Mike Gourley. I'm the Deputy Minister of Finance for Ontario. With me today I have Steve Dorey, who is the assistant deputy minister of finance responsible for the office of economic policy. Mr Tony Salerno is also an assistant deputy minister with the Ministry of Finance and the chief executive officer and vice-chair of the Ontario Financing Authority.

As you indicated, I have a brief presentation. There are a number of slides; I believe everyone has a copy of them. I would like to begin by illustrating the relationship between the Ministry of Finance and Ontario Hydro. What we have illustrated on the first slide is that essentially there are two very formal aspects to the relationship, one defined in the Power Corporation Act, having to do with Hydro's borrowing authority, the approval process for that borrowing authority and financial reporting and public accounts of Ontario. Of course, the Ministry of Finance plays a key role as an adviser to government in respect of such matters as the transition to competition, the nuclear asset optimization plan and competition, the provincial guarantee of Hydro's debt, the relationship between

NAOP and the debt retirement and the issue of stranded debt.

The presentation today is intended to address issues that were raised in brief conversation with committee staff about the nuclear asset optimization plan and the directions set out in Direction for Change, the government's white paper.

On slide 2, under the Power Corporation Act, clearly Hydro requires the approval of cabinet to use the province's debt guarantee, and it requires approval to borrow in fact. That borrowing authority is provided in the form of an order in council. The specific details, if I could put it that way, of the financing require further approval through the Ontario Financing Authority, which is part of the Ministry of Finance and is an agency which I chair. The technical details of the actual borrowing program are subject to, if you like, a technical approval.

The borrowing approval process is an annual strategy. It is submitted by the management to the Hydro board for approval. Subsequently that plan is reviewed by the Ontario Financing Authority, and any comments on it are provided to the board prior to their approval. The approval of the specific issues of debt is undertaken by the Hydro audit and the finance committee, and of course, as I indicated earlier, Hydro itself consults with the Ontario Financing Authority staff as to timing of those issues, the market and the terms of those financing arrangements.

In terms of financial reporting — and I'm reviewing, obviously, some matters that the committee has already covered, but I think it's useful to establish the context and the role the Ministry of Finance plays — Hydro presents its financial statements in its own annual report. That report is prepared by management and approved by the board of directors. These financial statements are reproduced as part of volume 2 in Ontario's public accounts.

Page 5 reflects specifically note 7 of the financial statements of the public accounts of Ontario. As at March 31 of this year, they indicated, as has been the practice over several years, Hydro's results are not consolidated as part of the province's results; it's a self-sustaining, separate corporation. However, the public accounts do provide the actual details of Hydro's results for the year. As at that date, the outstanding debt issue for Hydro, and guaranteed by the province, was \$32.1 billion. The concerns Hydro has had with respect to its monopoly status and future competition, particularly in respect of stranded debt and future risks in respect of a guarantee, are all noted in those



notes. Hydro itself pays to Ontario \$162 million in the form of a debt guarantee fee, and that was for last year, and water rental fees of \$118 million.

I mentioned that the Ministry of Finance has a policy and advisory role. Obviously, the ministry provides advice to the Minister of Finance in his role as minister and provides advice as cabinet deals with matters such as approvals of new generation projects, approvals of fuel or other Ontario Hydro contracts, any issues related to electricity rates and the design of those electricity rates and any regulatory policies Hydro is involved in.

There is another series of matters which, as we indicate here, affect Hydro indirectly, such as international trade, a general competition policy, environmental policy, taxation and others, all of which we would provide advice to the Minister of Finance on in carrying out our role.

**1010**

Page 7 indicates that the Direction for Change outlines concerns that Hydro will take some advantage in the interim period, as it were, to secure advantages over that period. I think the market design committee, the re-designed Ontario Energy Board and a number of other initiatives included in that paper will ensure there is very close scrutiny of all activities in this so-called transition period between now and the time full competition arises. The phasing out of the debt guarantee is indicated, and it will be phased out only if there is a substantiated business case to support new investment. There will be, of course, the interim power pool, which will make the supply and costs of electricity transparent to customers, and I think that will help as well, providing a context for those investments.

In respect to the nuclear asset optimization plan and the competitive environment, I think it's fair to say that Hydro formulated its program knowing that competition was coming but without having the precise details of the restructuring that were proposed in the white paper. It was clear that this plan would need financing and that specific approval for the debt guarantee will be required, as I indicated earlier and as indicated in the white paper, in the form of a substantiated business case. I mentioned the power pool. As I say, I think the nuclear asset optimization plan was prepared on a so-called status quo basis, recognizing that competition was on the horizon.

As part of the implications for debt retirement, the nuclear asset optimization plan clearly changed a plan that included a \$6-billion retirement of debt over the next three years. It clearly changed the performance estimates, reducing the future cash flows that were anticipated as part of an ongoing nuclear production program, as it were. Clearly, with the funding of NAOP, there will be no debt retirement over this period. Successful implementation of that plan will have to produce significant cash flows to retire debt in the medium to long term. The rating agencies, in the questions and discussions we've had, have clearly indicated that Direction for Change and their review of the nuclear asset optimization plan were sufficient to confirm the credit rating of the province and Ontario Hydro in terms of both short-term and long-term paper.

Page 10 alludes to the provincial guarantee, that the debt guarantee will remain in place for existing debt — that's an important message to existing bond holders; the debt guarantee will be phased out on this substantiated business case basis by the year 2000; the financing will be subject to a market test; and obviously the government will have to make that decision in the interim period as to whether or not to provide the guarantee.

Stranded debt, on page 11, clearly is the debt that the commercialized successors of Ontario Hydro might not be able to service in a competitive market. There are several variables, as the committee has heard, that determine the level of so-called stranded debt, including future competitive electricity prices, the demand for electricity, and the cost performance of the industry.

The paper Direction for Change sets out a plan for dealing with the stranded debt and for putting the electricity industry and the companies in it on a sound financial footing. I note specifically, in respect to stranded debt, that Dr Bryne Purchase has been engaged to lead consultations on stranded debt and options for structuring a transition charge for the newly restructured industry.

Many of the issues in the comments I've made today have been shared with rating agencies, with investors in conference calls, as you might expect, existing investors wanting to know what is happening to the industry, and in face-to-face meetings that have been held and will be held, because we're in the middle of that process now, in major financial centres. We're undertaking those meetings and those reviews in concert with Ontario Hydro staff, so it is Ministry of Finance and Ontario Hydro staff who are present at those meetings and available to answer any of those questions. As I say, many of those issues I've addressed today have been asked by others. Generally speaking, in all the discussions, the reaction to the white paper, Direction for Change, has been positive.

I look forward to answering the committee's questions today, with my colleagues.

**The Chair:** Thank you very much, Mr Gourley. We will begin the questioning again by caucus, and we will begin with Mr Conway; five minutes per caucus.

**Mr Sean G. Conway (Renfrew North):** Thank you, gentlemen, for appearing today. Mr Gourley, good to see you. As I expected, you look robust. You sound fulsome and very much in charge, as we know all deputy ministers of finance are around the nation these days.

I want, Michael, to ask some questions of you particularly about the chronology from, say, June to August 1997, because my particular concern in the first round is going to be the development of the so-called nuclear asset optimization plan and the involvement of the department of finance in that plan. Can you tell the committee, Mr Deputy, at what point this year you were notified by anyone over at the Hydro head office that the Andognini process was likely going to lead to what we now know to be the recovery plan for an ailing nuclear power division?

**Mr Gourley:** One of the points I made in my remarks was about what I'll call the formal relationship between finance and Hydro. We have, I believe, a good working

relationship with Hydro, which is necessary in order to carry out the obligations under the formal relationship. I think it's fair to say that Hydro indicated it was having a review, the nature of which was obviously subject to some discussion, but it was having a review early in the spring. What the results, what the conclusions of that would be at that point were simply characterized as significant.

**Mr Conway:** When did you personally hear that there could be significant cost implications of the nuclear recovery plan?

**Mr Gourley:** Eleanor Clitheroe gave me a call in June or so and indicated that the report was being prepared and it could have significant implications.

**Mr Conway:** So you heard from Ms Clitheroe some time in June that there could be significant cost implications of the so-called recovery plan. Can you tell the committee what you did, as the person who has something to do with the debt guarantee, following that news in June?

**Mr Gourley:** To be quite frank, I think that was very consistent with the fact that the government itself had indicated concern about Ontario Hydro and that Hydro had indicated in the springtime that it was conducting a review. For me, at that point I was simply alerted to the fact that a report would be coming. I expressed interest in it; I asked if we could have a copy of whatever results as soon as they were available. There were some parts of our conversation — I'm talking about the conversation with Ms Clitheroe — at this point which simply indicated that one of the issues was the overall rating of Ontario Hydro nuclear plants, their performance rating, which was going to be realistically assessed as part of this process and would likely result in a significant statement, a negative statement, if you like, about their condition, whereas most people might have thought they were in reasonable condition.

**Mr Conway:** Did you as Deputy Minister of Finance attend at any meeting with Ms Clitheroe and any of her senior Hydro colleagues, including the chairman, between that period of time just indicated, in June, when you became aware of the significant potential of cost implications out of the recovery plan and the announcement of the recovery plan on August 13, 1997?

**Mr Gourley:** Yes. In the week before the announcement, I did attend a meeting, at which —

**Mr Conway:** Who was at that meeting, to the best of your recollection?

**Mr Gourley:** To my recollection, not present for the entire meeting but for part of the meeting, Mr Farlinger, Ms Clitheroe, Mr Andognini, myself, Ms Burak as secretary of the cabinet, and there may have been one or two other individuals.

**Mr Conway:** That's a pretty good list. That's about who I'd expect to be there. Can you tell us what concerns you brought to that meeting? Did you ask for that meeting? Was that a meeting at your call?

**Mr Gourley:** As I indicated, this was part of our working relationship at that point. Eleanor had called me and indicated that the report was available. I said: "Great.

We would like to specifically talk about it. Let's get together and discuss it."

**1020**

**Mr Conway:** Were you made aware at that meeting that it was likely that within a few days the Hydro board would approve in principle the so-called NAOP?

**Mr Gourley:** At that meeting, the basic premise was that it would be presented to the board. What the board would do had not been decided at that point in time, what form of resolution it would take, but clearly the board would be presented with —

**Mr Conway:** At that meeting on August 8 or whenever it was — I think it was August 8 — did you as the Deputy Minister of Finance understand that the NAOP would involve a cost of something between \$5 billion and \$8 billion?

**Mr Gourley:** Yes, I did.

**Mr Floyd Laughren (Nickel Belt):** Welcome to the committee, gentlemen. The week before the board meeting, which was on Tuesday, August 12, the Minister of Environment, Mr Sterling, sent a letter to —

**Mr Conway:** The Minister of Energy.

**Mr Laughren:** The Minister of Energy and Environment at that time, correct. He obviously had been briefed on what was coming down. He sent a letter to Mr Farlinger in which he said that he assumed the board would examine all options before deciding on what they would do. Those are my words, but that's basically what he said to them. Then at the board meeting, that letter was not given to the board members until after they'd made their decision on the recovery plan, which seems strange to some of us. I won't ask you to comment on the strangeness of that, but that did seem strange to some of us. I'm wondering whether or not you were aware of that request that other options be examined before approving the recovery plan.

**Mr Gourley:** I understood that the minister was sending a letter to the chair of Ontario Hydro, and the issue of alternatives was one that I was familiar with.

**Mr Laughren:** So you were aware that they were expected to examine other alternatives.

**Mr Gourley:** I can't say that I saw the letter before it went or any of that with precision. I understood that the issue of alternatives was going to be placed before the board, as it were, before the chair.

**Mr Laughren:** Were you surprised that events unfolded the way they did?

**Mr Gourley:** I wasn't present at the board meeting. I expected the board to have a presentation. My understanding was that it took several hours to present and there was a broad discussion on it. That's the nature of a board.

**Mr Laughren:** Given what you know about the recovery plan and its costs and, as a matter of fact, your responsibility in this regard it seems to me, do you think that Hydro is going down the right road?

**Mr Gourley:** Clearly, the chair of Hydro has said that he believes that the plan that's been approved is one that is flexible and that can accommodate consideration of other alternatives. Clearly the intent of the minister's letter



and our interest as the Ministry of Finance was that alternatives be explored in the depth necessary to satisfy the government that the plan that was being proposed was robust, rigorous and sufficient to meet the needs of a substantiated business case, as it were, that we've indicated in the white paper as the appropriate test for any program, including this particular one.

**Mr Laughren:** I'm a little unsure of what you're saying here. What I'm trying to understand is whether or not you think that recovery plan is an appropriate plan for Hydro, given its costs.

**Mr Gourley:** In my view, given the performance of Hydro up to this point in time, the plan is absolutely necessary to deal with the declining performance. If you simply look at the rated performance and the production of the nuclear plants, the extension of that progression, the deterioration is a problem. Some plan had to be produced and this plan, based on the expert advice of the team that Hydro has assembled, is designed to deal with that.

**Mr Laughren:** But does it not bother you that the only plan that Hydro looked at was the nuclear plan, even though they'd been asked by a senior government minister to examine other options?

**Mr Gourley:** My understanding, and from the discussion and from the comments that were made by members of the board here, was that the board is in fact examining and will be examining other alternatives, other variations on the theme. Mr Farlinger has clearly indicated, as far as I understand, in public statements that other alternatives will be examined, but this is the direction which it intends to take. It intends to focus management resources on 12 of the plants and carry them out.

My view is that a plan is necessary. I don't think that I'm technically qualified to judge whether 12, 14 or whatever number of plants should continue to operate or whether seven or five or four should be laid up. But an action plan is definitely necessary and I think this one is being subject to both this committee's deliberations and the deliberations of the board itself.

**Mrs Helen Johns (Huron):** I'm just interested in a couple of pages in your presentation. If I could direct you back to page 7, I'd like to talk about the transition to competition. One of the things we're most concerned about in this committee is the accountability of Hydro in the transition period. We're concerned that maybe enough scrutiny won't go into this plan over the next three or four years until the competitive market steps into place.

I'm a little surprised by what I think you're saying on page 7. What I read you're saying is that there are going to be controls there that will add accountability to Hydro making these grave financial decisions over the next three or four years. You believe those to be in place and to be able to monitor Ontario Hydro. Can you just talk to that issue?

**Mr Gourley:** Yes. First of all, I think that the environment for any investment that Hydro's going to make has changed as a result of this committee's deliberations, as a result of, if I could call it, the surprising nature of the

problem as identified in the report that preceded the development of the nuclear asset optimization plan.

The government is not going to be able, to use, if I could call it this way, the past practice in considering Hydro's investment plan because there will be a number of interested groups looking at those investments, and I'll pick one in particular. Anyone's who's going to be competing in the future with Ontario Hydro is going to want to know that any investments that are being made are being made in an appropriate manner, subject to a substantiated business case, the expression that was used in the white paper.

Basically, those people who are going to be competing with Hydro want to know that Hydro is not going to be gaining any advantage in the two-year period through its access to a provincial debt guarantee. I believe that the rules of the game will change. The level of public debate will change and I think that will change. I've used competitors as perhaps a new discipline on the horizon.

I think the board itself, as a result of this committee's deliberations, as a result of the knowledge that it will be facing a competitive environment, will be examining those decisions much differently than they would have under an assumed continuation of the monopoly environment. I believe that the next two years will see major changes in the way that business cases for investments are evaluated.

The Ernst and Young report provided a whole series of tests that it felt should be applied to these investments. The combination of those three things, in addition to this committee's deliberations, I think will provide the people of Ontario, the ratepayers with some comfort perhaps that there is a more rigorous process and there will be a more rigorous process of accountability for those investments.

1030

**Mrs Johns:** The reason I wanted to have you here is because of my financial concerns about the stranded debt, or the stranded role the taxpayers may have to pay, I suppose would be a better way of putting that. I'm concerned about two things with that. First of all, Ontario Hydro has decided they're not going to make any contributions to the debt over the next three or four years. I'm concerned how that will affect our ability to pay off the debt and what the credit rating agencies will think about that and that kind of thing.

Mr Laughren and I are pretty concerned about when we allow competitors to come into the marketplace. You have a specific company that may produce its own generation powers, so it won't on be any transmission line. How are we going to get them to pay for the stranded debt so that they don't walk away from the problem where they've had electricity for the last 40 or 50 years and now all of a sudden they have this. They're making their own and they don't care that Hydro has \$32 billion in debt that's really the taxpayers' debt. Can you address that and make me more comfortable with the stranded debt issue?

**Mr Gourley:** I'm going to ask Steve Dorey to speak to the issue, but I think a couple of things should be considered in the context of his comments. One is that we've asked Dr Bryne Purchase to look into the design of this

stranded debt to ensure that we have a stranded debt charge at the appropriate amount and structured in such as to avoid the very point you're making so that people will not be able to escape their obligations.

**Mr Steve Dorey:** With respect to your first question of Ontario Hydro not contributing to debt reduction over the next three or four years, the measures that have removed that \$6 billion of debt reduction that had been planned are measures that are potentially substantial reinvestments in the industry, and they will generate cash flow out through the medium term which will be used to retire debt. It's a delay, but those are reinvestments.

With respect to self-generation and how that might be handled, as the deputy said, we're going to take, with Dr Purchase leading the way, a very good look at the variety of mechanisms one might employ to recover stranded debt from power consumers, and that's certainly one of the issues we'll have to look at. There are some mechanisms one could imagine, exit fees and so on, that one could apply to people who leave the system and self-generate, which could ensure that they pay their share.

**Mrs Johns:** Could I just ask you one more question?

**The Chair:** Very briefly, Mrs Johns.

**Mrs Johns:** I know you're a guru on this white paper and you've looked at it for a long time, Steve, so I think I have the right man here when I ask this question.

**Mr Conway:** When you start talking about Floyd and Helen, that's one thing, but now Steve and Helen —

**Mrs Johns:** Pretty scary, isn't it?

**Mr Conway:** I'm getting worried about the impartiality of this process.

**Mrs Johns:** I'm going to miss my question because he's chatting.

**Mr Conway:** I'm observing, because it's worried me.

**Mrs Johns:** I don't necessarily buy, and I need you to convince me, that the rate of return that people will get from this NAOP investment will be paid off in any reasonable time that the bond raters and the credit raters will accept. What makes you think that the rate of return from a maybe \$5-billion investment would come soon enough that it's worth letting the debt retirement be eliminated for two or three years or more?

**Mr Dorey:** We don't know precisely. The white paper is designed to subject a lot of the decisions that are going to have to be made over the next two or three years to a market test, through the interim power pool, which will look at other sources of potential power. Through the removal of the debt guarantee, which can take place as soon as legislation is passed and the corporations are corporatized, they will have to go and borrow in the market without a debt guarantee to undertake some of those big expenditures. If the market doesn't believe those are viable investments, they simply won't be able to do that.

**Mr Conway:** I want to come back to the deputy. I'm getting increasingly concerned, Michael, because I know something about your professional competence, which is properly highly regarded, and I know something about the institutional culture at the Ministry of Finance. I've got to tell you, I, like many people, am incredulous that some-

body as beleaguered as Ontario Hydro, whose debt guarantor you are on our behalf, could come to you in the summer of 1997, when we know — they tell us — they have virtually no retained earnings, they're nearly insolvent, they are on the cusp of dramatic change in terms of electricity reform, they're not going to be able to meet the \$6 billion worth of debt retirement over the period planned for and they are about to embark on a recovery plan that may cost as little as \$5 billion and as much as \$8 billion, and nobody at finance said, as the former Minister Of Finance for Canada said here last night: "Just hold the phone. This is a very big obligation that the Hydro board is undertaking."

The impression many of us get is that there still is not a great concern over at the 19th floor of Hydro because there is this provincial debt guarantee. So my question is this: Have you got yet at finance any idea, for example, of what the NAOP will mean to increased publicly sponsored debt if these seven reactors that are going to be laid up as part of the NAOP — and now the chairman himself says what an awful lot of other people have told this committee, that if they're laid up for any period of time, they're not coming back.

Have you got any calculations, for example, as to what the additional cost to the Ontario taxpayer would be in terms of seven reactors that are laid up not to come back? What's that going to mean in terms of added obligation to the Ontario taxpayer? We've guaranteed that debt. Has any calculation been done on that?

**Mr Gourley:** On the issue of those seven plants, particularly on the issue of their not coming back, I think there are two specific issues: One is, shall I say, the write-off of the investment that is there, and perhaps as important if not more important, the issue of decommissioning. If they're not coming back, the whole issue of decommissioning comes into play. My understanding is that the committee has heard about the issue of decommissioning and has heard information about the calculation that I know Mr Andognini —

**Mr Conway:** I'm not interested in decommissioning. I want a specific answer: Are there any calculations done at finance? You tell us in your presentation that the outstanding debt was \$32.1 billion. I'm looking at NAOP in the short term. That's all I want to talk about, quite frankly, with you this morning. You're the guarantors of this debt. It's \$32 billion before we start into NAOP. The chairman is now telling us that it's probable that reactors that are laid up aren't going to come back. NAOP intends to lay up seven reactors. If those reactors don't come back, what does that do to the provincially sponsored indebtedness of Ontario Hydro, a corporation in the here and now that is very nearly insolvent?

**Mr Gourley:** We did look at that issue, but to be frank, if you're going to do a set of calculations assuming that those plants are not going to come back, you cannot ignore decommissioning costs. I understand that you don't wish to discuss it today, but you simply cannot ignore it. It is a significant part of the cost.



**Mr Conway:** It will only make my case stronger, so go ahead. But I want to know, inside my five minutes — I don't want to find out three months from now, Michael, what I suspect to be told, that, "Yes, the costs were higher, the revenues lower, the exposure greater, and we just can't find anybody anywhere to exact any accountability from." You're the debt guarantor. You're a pretty important person in all of this.

**Mr Gourley:** What we have to be able to establish is, what will be the implications of the writing off of these investments? If they're not coming back on stream, how are they going to be treated from an accounting point of view? There have been calculations done. I don't have them with me today, but I'm happy to provide the committee with the calculations. I believe they will reflect the calculations that Hydro presented to you, because we don't have any better details —

**Mr Conway:** But the Hydro financial people came here and told us 10 days ago something that I did not expect to be told, and they were supported by their auditors, which I suppose we shouldn't be surprised at. We were told, and I'm sure you've seen this, that this company now is very nearly insolvent. We are told they've got virtually no retained earnings. They plan on three or four years of negative income. They're going to lay up seven reactors that they probably aren't going to bring back. If everything goes well, they might be able to buy the replacement power at \$2 billion or \$3 billion — if everything goes well. Of course they're going to be heading into a very competitive market in two years' time. And by the way, the Hydro finance people, supported by Ernst and Young, said officially — you've got to believe there's another story, but their official line to this committee is that all these calculations were done on the basis of the monopoly status continuing over this next five-years.

I've got to believe that when people like you at finance hear that, you must go through the roof. If it's bad before competition, this becomes very nearly cataclysmic about the year 2002. If this competitive world takes root and the downward pressure on revenues is there, a company that's almost insolvent in 1997 is going to be in very real difficulty, I would think, by 2001. I guess my question is, what about the stranded taxpayer?

1040

**Mr Gourley:** The issue of how much is the stranded debt — because ultimately that's where you're going. I think I understand the question.

**Mr Conway:** Yes, and this plan intends to impose potentially billions of additional stranded debt on that poor taxpayer.

**Mr Gourley:** Hydro itself, in its own reports, had an estimate of stranded debt that was in the order of \$15 billion or \$16 billion, as I recall the number, and what we said in our presentation is that the amount of that stranded debt and the calculation of that is very important. If those plants don't come back on stream, the stranded debt will be larger. The stranded debt is of course the amount of debt that Hydro has acquired, for whatever reason, for whatever purpose, including everything up to March 31

and between now and the time competition comes in, that cannot be supported by those commercial successors.

The amount of that stranded debt is a key issue, and it will be determined by whether or not those plants come back on stream, it will be determined by future competitive electricity prices. I understand, for example, that to calculate a stranded debt, you have to make certain assumptions about what prices are going to be for electricity in the future.

**Mr Conway:** But Hydro has come to this committee to tell us that they have developed a recovery plan in the spring/summer of 1997, projecting into the future by five years, that assumes the status quo. Does that give you, ought that to give this committee any comfort?

**Mr Gourley:** To some extent. I didn't anticipate your question, but I certainly believe Hydro's own documents say competition is coming. Their annual report says that; the footnotes to the province's financial statements say that competition is coming.

The report itself, NAOP, may have been produced with some underlying assumptions, but I can't and don't believe that anybody at Hydro — and this may be challenging as a notion — said, "We don't think the government is going to adopt a position of competition for the electricity industry," when in fact it had a commission which recommended that and subsequently when it released a paper —

**Mr Conway:** I don't disagree with you, but I'm telling you what we heard here from Ms Clitheroe and her colleague just 10 days ago. There was some incredulity on my part and I think on the part of others, because they told this committee and they produced documentation — I'm quite aware of the annual report. I read it, like you, and I think there's a lot of sense to that. That's why I'm absolutely stunned to be told by the vice-president of finance of Ontario Hydro and its auditors that this plan — here's the document. This is what they brought for the committee. They said, "Our operating assumption for this plan, for these numbers" — and these numbers are the numbers that tell us three, four or five years of negative income, of virtually no retained earnings. This is before we start to spend money on replacement power, before we start to think about what we do with these laid-up reactors, before we start into those decommissioning costs.

I'm not an economist, but I'll tell you, I can't believe that — finance wouldn't let the most junior ministry of government walk into the Frost Building and try to pull this off. I can't believe you people are not taking a more active and more vigorous oversight responsibility, if for no other reason than as the public's debt guarantor, in pulling the reins on this operation. They're in a tough spot, but I'm very worried that they're going to be sending — because you've got the guarantee, and by the time you figure it all out they'll have added another \$1 billion, \$2 billion or \$3 billion to it and you'll have to pay it because the costs have been incurred.

**The Chair:** Just before I go on to Mr Laughren, Mr Gourley, in your response to Mr Conway you did indicate that in the ministry you do have what otherwise might be

referred to as financial modelling for lay-ups and decommissioning costs and other kinds of options. Would you —

**Mr Gourley:** What I was responding to was Mr Conway's request for whether or not we had any calculation as to the implications of not bringing those units back on. I will provide that to the committee.

**The Chair:** Do you take issue with the way I phrase it in terms of lay-up cost and/or decommissioning costs?

**Mr Gourley:** No.

**The Chair:** All right. Could you table that this afternoon with the committee? You obviously have them on hand.

**Mr Gourley:** As soon as I can, I will do that.

**The Chair:** If you would, please, this afternoon.

**Mr Laughren:** Mr Gourley, I'm very much a linear thinker, so help me out here. The debt at Hydro now is \$32 billion.

**Mr Gourley:** Right.

**Mr Laughren:** It's not going to pay down any of that debt in the next three years at least — I don't know how they can say just three years, but anyway three years. At the end of three years, what will that debt be?

**Mr Gourley:** The answer is it depends on the level of investment that's undertaken under NAOP, but to comment, the reason it was three years is that was the plan that had been put in place. There was nothing special about not paying down debt in three years. It's just that there had been a publicly announced program to actually pay down \$6 billion in debt over three years. So there's nothing special about terminating — if the planning horizon had been longer than that, it would have been —

**Mr Laughren:** We know it will be.

**Mr Gourley:** The debt retirement program that had been announced is no longer in effect and is impacted by NAOP.

**Mr Laughren:** Let me cut to the chase then. What I'm trying to find out is, how high is that debt going to go before it's being paid down again? Assuming that even if you picked \$5 billion as the recovery plan number — although I've never seen Hydro come in under cost, but anyway, if it's \$5 billion — what's the debt going to climb to before it starts declimbing?

**Mr Gourley:** The difficulty I have on this issue is that the \$5 billion as proposed under NAOP was to be funded from internal sources. Clearly, those sources would have been part of the previous debt retirement program. So in essence, the \$6 billion that's not going to be paid down is going to be funded from internal sources. I thought the first part of your question was, "How big is it going to go?" and I say it depends. You've given the example of \$5 billion. The \$5 billion could be supported from internal sources, at which point further consideration of paying down debt is possible.

**Mr Laughren:** But the interest on that debt is ticking too, right?

**Mr Gourley:** Oh yes, absolutely.

**Mr Laughren:** So it's going to go —

**Mr Gourley:** It would all be part of their debt. Then once the competitive environment arises, the issue of

stranded debt becomes that debt which cannot be supported, so it will be part of that whole equation, as it were.

**Mr Laughren:** Are you of the view that whatever the stranded debt is, it must be paid for by electrical users specifically, or producers, at the end of the day, the hydro ratepayers, as opposed to being on the tax base?

**Mr Gourley:** The white paper suggests, if you like, all of the above. It does say there is a possibility of the taxpayers assuming that. In the ordering of them, if one could read into the ordering of the possible bearers of that responsibility, the ratepayers are first and taxpayers are last. Again, it depends on the amount of debt.

**Mr Laughren:** I'm aware of what the white paper says. I'm asking you, though. Where do you think that stranded debt should go? How should it be done?

**Mr Gourley:** I think stranded debt should be paid first by ratepayers. That's a responsibility. Otherwise we've incurred all of this. Really, there was a subsidy that should have been charged to taxpayers; it should have been reflected in deficits and all that in the past, and that's not the case. If the taxpayer were to be responsible for this, I think we would be treating Hydro differently than we are today. Our assumption today in going forward is that Hydro will remain independent, self-sustaining and that successors will be as well.

**Mr Laughren:** So if a large corporation such as General Motors or Falconbridge were to generate its own electricity completely on site, would you agree that there should be a charge on them at that point if there's a stranded debt charge?

**Mr Gourley:** I think it's fair to say that the generating capacity, the debt that's been incurred for transmission and all the activities of Ontario Hydro are the responsibility of all participants, and if one participant decides, whether it be a large corporation, a municipality, a university, whatever, they should bear the responsibility for the debt which has been incurred to date, but obviously no responsibility for future.

The form of that charge, the nature of it — Mr Dorey indicated an exit fee concept, which is not unknown, or some other form of dealing with that issue is going to have to be considered by Dr Purchase and then recommended to the government.

1050

**Mr John O'Toole (Durham East):** I think the inquiry is basically chasing down the stranded debt issue. It's very important because the taxpayers of Ontario, as Mr Conway has stated, are really the shareholders. With that, you've clearly said to us this morning that the higher rates you would anticipate to deal with this debt will be reflected in the customer's bill, ultimately.

**Mr Gourley:** Right. Could I just respond to the higher rates? The stranded debt charge could be funded within the current rate. There's no implicit increase in rates that is necessary. It depends on the amount of the current rates that you dedicate for paying down stranded debt. If you have a large amount over a long period, you could obviously accommodate a large stranded debt. So the form of that stranded —



**Mr O'Toole:** In my unsophisticated mind I ultimately see all the revenue coming from the user. There's no equity floating here that's going to defer or spread some of this cost. I don't care how you spin the conversation; technically, all revenue comes from me and you.

**Mr Gourley:** Right, as ratepayers.

**Mr O'Toole:** So however you depreciate or amortize or capitalize, I'm going to pay. Yet everything I read about competition and all that is flavoured very nicely with the expectation of the British experience, that the spreading and competitiveness will drive rates down. It's all through the documents, very acceptable language, actually — extremely unbelievable, technically — no, it really is. I just don't see it. Eventually, it's a shell game. We've got this \$13 billion here. It's in this report, at footnote 19. They admit clearly with all assumptions, still having a monopoly, they just can't deal with this problem here. Read footnote 19, a very troublesome note. They're saying, "We just cannot deal with it."

Not only that, the scenario's technically a lot worse than that. It's saying, "Oh, gee." If I look to the history, they have written off, from 1993 to 1997, some \$7 billion. I read the financial statements, and all the time it shows some ability to write off some of the liability or the debt — kind of a fragmented approach to revenue and expenditures. Really, even now they've revised that. With this plan they're saying they're going to revise the 1997 forecast of writing off \$700 million; they're going to write off another \$2 billion, which takes the write-off.

The write-off means that the book value is really overestimated. That calculation occurred a number of years ago, and I put to you — you're the expert. The original plan with the nuclear sites was basically a 25-year operation. Then they went to a 40-year operation. All that did was just take a second mortgage out. With the stroke of a pen, they just reamortized the whole deal over 40 years instead of 25 years. Now it really isn't even going to be 40 years, but it still shows on the books, nicely technically calculated with the strategic debt retirement, as one fortieth. Do you understand what I mean? Mr Conway is much more able to articulate my concern. To save my five minutes, am I oversimplifying this or am I somehow not assessing this situation very accurately?

**Mr Gourley:** I'll deal with your characterization of the write-offs. I think it's fair to say that in the first write-off you referred to it was argued, based on information at that point in time, that that was essentially the only write-off, that was a clean-up. There were some other business risks that would have to be evaluated in the future, but that would essentially be the largest single write-off and would have to be dealt with in the future. Subsequent events and decisions showed that not to be accurate, not to be correct at any rate, and additional write-offs were required and are required.

To be frank, the government's Direction for Change paper simply said: "This continued approach to writing off some here and some there has to be subject to greater discipline than it has been in the past. That will take the

form of proper accounting and proper accountability, which can only come in a competitive environment."

You referred to an accounting practice of changing the useful life expectancy of these assets where it's clear that in other jurisdictions, from a financial point of view, there have been amortizations of the expense over periods much less than 25 years, because that's the real and realistic financial approach to it. Physically, they could still last 40 years, but I think it's a matter of viewing these assets in the future in their financial context in a competitive environment, how long that life will be. So there may be changes yet to come that reflect that.

**Mr O'Toole:** Very good. I have very few minutes and I just want to look at the Power Corporation Act. It permits a full cost recovery in the rates, including the SDR. I'm not sure if we have a full cost accounting model, technically. That's really where I'm coming from. But I think it's almost a conundrum, because on one hand you have a political atmosphere that says, "Thou shalt freeze rates," which really means — we know the revenue stream's kind of fixed, dependent, of course, on the demand side, so you really have this restraint here.

What it actually does is drive the costs and absorb them internally — ie, restructure, in the business jargon — in the organization. In a private sector organization, they do all the things they have to do to be competitive. In a publicly funded one, they just say, "Of course we will." They respect the rate freeze, march along and just keep handing you the bills — handing us the bills, technically; thank you for managing them.

Are they able, in their organization, to really drive — Maurice Strong tried it. There will be those who argue Maurice Strong dismantled the organization's effectiveness by reducing 10,000 employees —

**The Chair:** Just ask your question, please, Mr O'Toole.

**Mr O'Toole:** My question to you is, is the organization able to drive down internally some of the recovery costs through increased efficiency, plant performance? What assurances do I have that those performance rates will meet what they say, 86% capacity?

**Mr Gourley:** There are two comments. First of all, I think you're right to focus on the issue of cost. What assurance do you have that the cost can be found? Certainly, there are studies that show that whether it be through benchmarking or comparing with private sector companies, there are cost savings that can be achieved. How those are achieved and whether they're going to be achieved properly is obviously the challenge that faces Ontario Hydro management and its board to supervise that sorting out of the cost, that reduction in the cost, but as long as the price freeze is in effect, the costs essentially are the main focus of attention, as they should be.

Future electricity demand, as you mentioned, is absolutely key as well, as are future electricity prices beyond that, because Hydro will have to deal with costs, anticipating a competitive environment. It won't be sufficient just to deal with costs in the transition period; it will have

to set up its cost structure to deal with the future competitive environment.

All the other environments, including the British experience, I'll say after the decisions were made, had events change the context in which those companies had to operate. I don't expect that Ontario will be any different, but I think Hydro is going to have to show that its plans are robust to accommodate future differences, more aggressive competition, more fluctuation in the price of electricity, the price of competitive products, and they're going to have to demonstrate that they can get the cost structure down to be competitive. Otherwise they are not going to be able to compete.

1100

**Mr Monte Kwinter (Wilson Heights):** Mr Gourley, I'd like to get back to the responsibility of your ministry and its relationship to Hydro and the oversight provisions you have. You talked about this meeting that you had on, I think it was August 8, where you got an overview of the fact that there were some significant developments taking place and some significant obligations that were going to have to be undertaken for the rehabilitation of the nuclear facility.

We certainly had Ms Clitheroe and Ms Ng here saying that all their calculations, notwithstanding that everybody knew that competition was on the horizon, were based on a monopoly, regulated utility. My concern is this: My colleague Mr Conway has said that the corporation is virtually insolvent. If they were a private company, if they had to go into the market to raise this \$5 billion to \$8 billion, they wouldn't be able to do it. Not only wouldn't they be able to do it, they wouldn't be able to sell the bonds they have now. Is that a fair evaluation?

**Mr Gourley:** On their own, without the provincial guarantee?

**Mr Kwinter:** On their own.

**Mr Gourley:** I think the market would certainly make a very sharp statement to them about the business plan and would be looking for where they're going to be five years from now. They would be looking for, "How are you going to get the costs down?" They would be asking all the questions that Hydro's going to have ask itself in terms of getting ready for competition. The market would ask those questions bluntly, and if the answers weren't forthcoming they would have difficulty borrowing or they would have to pay a much higher price for the borrowing than they are currently paying.

**Mr Kwinter:** That is in a regulated monopoly, but the key to their ability to sustain themselves is your guarantee. We saw the Standard and Poor's reaction even after the white paper. They as much as said: "As long as the province is on the hook, we have no problem. We would have some very serious concerns if the province was not guaranteeing that debt."

The question is this. We have the board considering this NAOP plan, which was supposed to go to the board as an information item only. You had met with some of the key players — Mr Andognini, Mr Farlinger — and they apprised you of the direction they were going in. But to

this day — we've had Mr Andognini say that he's still plumbing the depths of the problem, he doesn't know the costs. We asked him, "What is the cost of the layout and what is the cost of decommissioning?" He'll give us US experience; he doesn't know the Canadian experience. We're talking significant amounts of money.

What troubles me is, how could the Ministry of Finance, as the guarantor, be so casual about what they're doing in saying, "We've been apprised of what they're doing and that's fine," without taking a very detailed look, looking at the options and deciding that since we are going to eventually be on the hook for this money, we need some better answers?

**Mr Gourley:** I can only give you my assurance that there's nothing casual about our attitude towards this situation. The Ministry of Finance has not been casual at all. It's indicated that we are interested in having assurance that the alternatives to a particular direction are fully and adequately considered. I believe the Ministry of Finance and everyone, including Hydro itself, would have preferred, I'll call it a timing, different than the one in which we were alerted to the possibility of this report and then provided with the details immediately prior to a board meeting, at which time there was very little time to go through the normal analysis and review that we might do.

Certainly, our expectation is that Hydro will at the end of the day be shown to have considered all the alternatives, as it said in its board meeting. I take the board minutes to be a serious commitment to reviewing those alternatives. It's my view that the Ministry of Finance has carried out its responsibilities: in the first instance assuring itself that there is nothing in this plan that we believe will jeopardize the existing guarantees, assuring itself that any future plan is going to be subject to, as I said in my opening comments, a much more rigorous examination than has been the case in the past. That's not anything other than the statement that the context has changed. There's going to be competition, so \$1 billion or \$2 billion or \$5 billion invested in this plan is going to have to meet different tests than \$5 billion had it been spent a few years ago.

The issue of our oversight of it: I believe we are carrying out our oversight responsibilities appropriately and with due diligence. I leave it to the committee to pass judgement on it.

**Mr Kwinter:** Mr Gourley, when I questioned members of the board and I asked them about the letter they had received from the minister — and we've already heard from Mr Laughren that the letter was there but they didn't really know about it until after they had made their decision. When the minister called for the board to examine all options, the members of the board who appeared before this committee told us their interpretation of that was to examine all the options presented in the recovery plan, which were all nuclear, every one of them. There were six options, and the recommendation that was given to the board by Mr Andognini was either item 5 or item 6. They felt that the only options they were considering were the nuclear options.



The title of the presentation wasn't an energy optimization plan; it was a nuclear asset optimization plan: How do we optimize the nuclear asset? That's all they were considering.

What I don't understand is how you say now that they have the ability to take a look at all these other options when they're going to start laying up these reactors, some of them, in March. They're already down the road, they're going that route. Everything that has been said by the chairman, who said there really isn't another option when you consider that we have 60-plus per cent of our energy requirements coming out of the nuclear facility — we've got to go that route. This is really, "How do we maximize that particular facility?" without looking at the myriad other options available. With all due respect, you keep saying, "No, no, they have the ability to look at these options." I don't see that happening. They're going down that road.

**Mr Gourley:** In respect of their examination of the options, it's my understanding that the committee is going to have Mr Farlinger here before it again, and you'll have to speak with him about the extent. But my understanding is that they will in fact be looking at variations on laying up reactors, that the alternative of running some of the reactors longer and therefore not having to buy as much alternative fuel is part of the options they are considering. Those are reasonable options, and potentially — if they are successful, although it depends on the practicality of those solutions — they could dramatically affect the cost of the nuclear asset optimization plan. If you are able to continue to operate or delay the layup of certain plants at Bruce or Pickering for a longer period of time, that would dramatically affect the cost of alternative fuel.

**Mr Conway:** Well, well, well. That's very interesting testimony, that.

**Mr Laughren:** I'm somewhat surprised at the testimony from this flinty-eyed deputy that —

**Mr Gourley:** I must remember to get more sleep.

**Mr Laughren:** I'll tell you why. You indicated when you were talking about Hydro that Hydro would have difficulty selling its bonds if it were not for the provincial guarantee, that if they were just out there on the market there would be very, very tough questions asked about the future and so forth.

**Mr Gourley:** Absolutely.

**Mr Laughren:** In fact you are the person who takes the place of those people who would buy the bonds, it seems to me, you're the one who's on the line, so I would just assume that you would ask the same questions that those tough-minded people who buy the bonds would ask.

**Mr Gourley:** Right.

**Mr Laughren:** But I don't get the sense that you've done that.

1110

**Mr Gourley:** Despite my flinty-eyed look, I can assure you that the questions we ask are tough and are intended to say: "Look, if you think these questions are tough, wait till you get to Bay Street or Wall Street. You are going to get really tough questions. These investors are not inter-

ested in what you're doing tomorrow. They want to know where their investment is going to be for the life of the investment we are asking them to make." It's not sufficient for us to say, "We have a plan that's going to take us through the next three years." It needs to say, "How am I going to be assured that my investment is good for the next 30 years?" in the case of 30-year issues.

To have a situation in which Hydro attempts to borrow in an environment of uncertainty is to suggest that the answers aren't going to be sufficient and will only be sufficient when we set up these companies, have the structures in place and Hydro has been demonstrated to have been put on a sound financial footing and will then, on its own, sink or swim in the market, based on those tough questions they will have to field directly.

I believe they are well aware of those. I think they will find that they echo the questions we're asking, and I believe we are carrying out our responsibility.

**Mr Laughren:** I guess what surprises me is that last night — I doubt you've had an opportunity to read the transcripts of last night's testimony from Mr Macdonald, Donald S. Macdonald, who knows a bit about this industry and about financing problems and so forth. Mr Macdonald — and correct me if I'm characterizing his comments in the wrong way — was, in my mind, quite clear. He said: "Hold it. Don't let them do it. Don't let Hydro do what they've said they're going to do. You need time to sort this out."

Of course Hydro is going to bring forth a nuclear optimization plan. Of course they are. Isn't that the culture of an institution like Hydro? I think it is. Here we have you saying, "That's okay. We'll guarantee your debt. Go ahead. Restructure yourselves on the nuclear model. Don't worry about the other stuff" — because that's what they're doing — and then we get Mr Macdonald coming in, who stands back from the fray and doesn't have your responsibility of guaranteeing the debt, and he's saying, "Holy smokes, don't let them do this." I would have thought that that's what you'd do. I'm really surprised that you're letting Hydro do what they say they want to do, without buying time, without seriously considering other options. You can say they're considering other options, but that's not what's in the recovery plan. Other options are not in that recovery plan; it's the nuclear recovery plan.

I wish you could explain to me how it is or why it is that you've bought into this nuclear recovery plan.

**Mr Gourley:** A couple of comments: First of all, I think it's in everyone's interests, whether it be taxpayers or ratepayers in Ontario, that Hydro take responsibility for ensuring that the \$32 billion in debt that has been accumulated is appropriately managed and that actions are taken to protect the assets that have been acquired as a result of accumulating that debt.

I think everyone would want to say: "Please ensure that my existing investment is protected. Let me know that my existing investment is protected. Second, in respect of my future investment, please assure me that you are making the right future investment and please assure me that

you've subjected that future investment to tests that will leave me feeling good about the long-term prospects of my organization."

The Ministry of Finance continues and is obligated to approve the borrowing plans of Ontario Hydro. We will continue to do that, and we will exercise our authority and play the role, if you like, as you described it, of investors, subjecting their proposals and their proposed programs to the appropriate tests.

**Mrs Barbara Fisher (Bruce):** Good morning. I'm going to make a couple of brief statements and then I have about four questions, so we're going to have to move along, because I have five minutes.

I will start with the issue that over the last couple of weeks we've talked about the bigger picture, and that of course focuses on the white paper and how that affects the long-term future of Ontario Hydro. However, we're faced with the dilemma right now of not being able to think as freely in that macro world as we'd like to and talk about micromanagement. Some people would really get upset at us having an opinion with regard to micro-micromanagement, but some of us have to because we're in a macro problem because of poor micromanagement in the past. I don't understand anyone who thinks that a \$5-billion to \$8.5-billion tag, if that's the real dollar value, is not micro or macro. I take a responsibility for that, and I take it very seriously.

Having said that, I want to ask a question of Steve Dorey, and it's going to be a fast one. You mentioned that this \$5 billion to \$8.5 billion is an investment in our future. As our chief economist — I'm trying to understand — when you put \$2 billion, which equates to almost a third of that investment, into replacement fuel, which protects nothing but totally expends something, protects nothing in terms of the asset we're already in debt for and trying to pay for, how can you say that's a protection or an investment in our future when it's really just a throw-away?

**Mr Dorey:** I guess there are two points there. One is the issue of the micromanagement and how these decisions get made and whether they're good investments. That's precisely why the white paper direction is to say: "Let's subject these investments to a market test. Let's have these successor companies go out there and borrow without a guarantee and see whether the market believes these are good investments."

With respect to the \$2 billion for replacement fuel and how you should see that as an investment, well, if that replacement fuel leads to moving resources to the remaining 12 reactors and raising their capacity from 60% to 65% to 86%, it may well be a good investment. But really what we want to do is to make sure the market makes those judgements rather than bureaucrats, because we've been making those judgements for a number of years and the market will do a better job.

**Mrs Fisher:** I hear you. My disagreement would be that if you invest that dollar in protecting the assets you already have — whether we like nuclear energy or not is at this stage of the game irrelevant. To me, the bottom line

is that all you're doing is putting off the inevitable problem anyway. We are delaying facing the problem.

I want to ask Mr Gourley a couple of questions here. Again, this is going to be considered micro but it does relate to four of the seven units we're talking about. In 1996 there was a recycle analysis report done for Bruce A, and finally we're having the opportunity on Monday to look at this. We should have had it two months ago. To me, it should have been one of the options on the table from day one. There was a recycle analysis report done and the consortium is addressing the committee on Monday. Are you aware of that other nuclear recovery as it relates to four of the units at Bruce?

**Mr Gourley:** Not that specific alternative, but in my comments earlier I made the point that the timing of the layup and the extent to which existing operations could be continued as an alternative to purchasing alternative fuel is an option which I believe Hydro is considering and will have to consider before coming to any final investment decisions on NAOP. I think they've clearly got a direction, but how that plan is actually implemented is very critical to the cost of the plan itself.

This issue of whether or not the Bruce plants, or Pickering for that matter, could continue to operate safely and adequately as an alternative to making that investment in alternative fuel is one I think that is —

1120

**Mrs Fisher:** Mr Farlinger mentioned that he would revisit it, and I respect that. Let me ask you this: If we had two years for that to happen before we go ahead and spend the majority of the \$5 billion to \$8 billion, I'd have a higher comfort level. We have three months. I'm talking about my community right now. We have three months. We don't have a year. We don't have two years. In fact we know in my community that that's where the negative impact is going to be felt in full. We're not hearing a lot from Pickering except for a referendum saying they have other concerns.

In my community we have an issue where we have 1,700 people being displaced, which from an economist's point of view, representing good guidance to the Minister of Finance and to the province, should have been taken into consideration before we allowed a larger part of that \$5 billion to be expended.

**Mr Conway:** Mr Gourley, I want to come back to your exchange with Mr Laughren, where I think you were much more helpful than imagined, unlike my friend Kwinter. I want to come back to that in a moment, because one thing is starting to become a bit clear to me, and that is, the difference between some of you people and maybe some people here and out in the community is that NAOP for you people is a bit like the Delphic oracle. It can mean a lot of things. I'm beginning to think there are people in government and in Hydro who think NAOP might very well be several things rolled into an ongoing parade, and I hope you're right.

I don't agree with my friend Kwinter's assessment. I happen to know — I think the word was "casual" and I noticed you stiffened. I'm not surprised you stiffened at



that word because my information is exactly what I would expect: that the finance folks have been anything but casual, that you are understandably concerned about what's been going on.

If you look at this picture, and this is a picture we got from Hydro's finance people. This is what they are projecting. This is a nightmare before competition and before decommissioning. If you factor in competition and you factor in decommissioning and laying up permanently those seven reactors, let me tell you, if I'm the Deputy Minister of Finance, I've got gas in amounts that would make TransAlta proud. I'm not trying to be funny, because this is about a real impact for taxpayers.

The concern I've got as competition dawns now is that the interests of Ontario Hydro and the Ontario taxpayer are really going to start to diverge. The interests of Hydro and the taxpayer, as we get to competition, are really going to start to diverge. If I'm running Hydro, as John O'Toole said, referencing footnote number 19, it's the stranded debt. I want to get into this competitive market. I want to be competitive. I have got to shuck as much of this debt as I can. As the Ottawa Citizen yesterday rightly observed, make no mistake about it, it's going to be a stranded taxpayer. We can all dress it up in whatever way we want, but you know better than most that at the end of the day a chunk of this — how big is yet to be determined — is going to end up with the taxpayer.

With that as backdrop, as you understand it, is NAOP sufficiently flexible in the minds of senior people at the department of finance as to contemplate, for example, significant adjustments in the number of nuclear reactors that get laid up in the next three months to three years?

**Mr Gourley:** Yes.

**Mr Conway:** Very helpful. It seems to me if I were at finance and I was looking at this and I knew that the regulator said to me, "These are safe reactors" — yes, Andognini tells us there's a real problem with personnel. He's the expert; I'm not. If I'm at Hydro, anticipating competition, I'm going to be concerned about other things, but if I'm at the Ministry of Finance, holding the debt guarantee, the first thing that's got to be striking me is, if we've got certain of these reactors that are apparently approved by the regulator as being safe and they can continue to operate for some months or maybe even a year or two beyond the so-called March 1998 deadline, then why wouldn't we do that?

It is a Hobson's choice, to use Donald Macdonald's phrase of last night, but I'll tell you, given this is a nearly insolvent company with \$32 billion worth of debt, that's an option that's at least got to be looked at.

I take it that finance has been discussing with senior brass at Hydro the efficacy and the possibility of adjusting some of those schedules to allow, if safety permits it and manpower can be found, the adjustment of some of those schedules for perhaps some of those seven reactors to be laid up.

**Mr Gourley:** This issue has been raised with Hydro. At least I believe the case is that they are going to examine — whether it's specific scheduling or not, I must

obviously point out that clearly we're not capable technically of making a judgement as to whether or not one plant can be laid up later than another. Our perspective would be, provided it can be done safely and reliably, that is an alternative that is very attractive and should be given whatever rigorous examination, because it will save money on the \$2 billion that will have to be invested in alternative fuel. But at the end of the day, we in finance have to rely on the judgement of the board and management at Ontario Hydro that it can be done.

If it can't practically be done, I, as the Deputy Minister of Finance, might wish a lot of things, but I cannot wish away the operability of that suggestion. It may be a very interesting theoretical plan.

**Mr Conway:** Let's cut to the quick on that. I accept what you're saying, but you're the banker. Let's be clear. You're not just some kind of viewer in the good seats; you are the banker. You're the mortgagor for an outfit that, through many governments, has not had a particularly good record of keeping to their fiscal promises, and you guarantee their debt. These birds have come forward in the summer of 1997 and told you, the banker, that there's a big mess at their principal generating division. You know what they know, namely, that there's going to be a big change in the electricity market in the next two or three years. These people now, with their record, want you to stand idly by and basically accept whatever bills are forthcoming by way of guarantees in the next two, three or four years, and going into this they've got a balance sheet that looks like that.

My question is, since August 12 have you undertaken, as the representative of the public of Ontario, any specific oversight measures on Hydro with respect to this NAOP plan; what it's specifically going to mean and what it's specifically going to obligate the taxpayer to pick up? Have there been any measures taken by way of specific, additional oversight imposed by you as the Deputy Minister of Finance on these characters over at Hydro as they proceed down the path of NAOP, having particular regard to the fact that you're going to get some additional hundreds of millions, probably billions of dollars worth of spending or debt that you're going to have to guarantee in our collective public interest?

**Mr Gourley:** We have had meetings with Hydro and have had communications and discussions about this issue, but essentially our effort has been to deal with key and critical issues such as — and I'll start with decommissioning because that happens to be one which I think is a very important one, and as the committee knows, that issue is being reviewed and analysed by Hydro.

The initial IIPA report had in it a reference to a safety report that was going to elaborate additional safety issues that have to be accommodated. So there are, if you like, additional potential investment issues. There are issues on the horizon that we in finance need to know about, because when we go with Ontario Hydro personnel to the investment community and say, "This is a plan; it will work, and it's based on a full and adequate disclosure," we have to know that's the case.

Again, to be frank, the fact that Ontario Hydro has undertaken this — and I believe in the way they have done it, it's been more open and helpful in terms of exposing the issues it has to deal with, making it a more realistic environment in which to examine these issues. I think that has been good. I think it's been good discipline. I think it's been helpful. In spite of all the concerns that individuals may have with it, I think this process is very helpful and very beneficial to the taxpayer of Ontario.

I just want to quote from a letter, which I'll provide to the committee, that I wrote to Ms Clitheroe in my capacity as Deputy Minister of Finance.

1130

**Mr Conway:** On what date?

**Mr Gourley:** This was October 28. Subsequent to the presentation to the board, we had had meetings with Hydro staff, one particular meeting I recall, on the issue of alternatives and on the issue of decommissioning costs, because that was one that was not identified. I'll just quote one paragraph. It says:

"While I can appreciate the board of directors' need to plan for the future, I think that the board should defer a decision on rate increase proposals" — which this was in the context of — "until such time as:

"It has clarified its policy with respect to the nature and extent of NAOP and non-nuclear safety-related activities;

"It has complete and accurate information on the future costs associated with these activities and the impact on the net income of the organization; and,

"It has reviewed all available alternatives for reducing costs within the corporation."

This was prior to the release of the white paper, but it's that sort of exchange that I think demonstrates, at least in my own view, that we are meeting, we are exchanging views. We are working cooperatively on the one hand and vigorously and diligently on the other with Ontario Hydro to ensure that taxpayers' interests and the economic interest of the province are being addressed.

**Mr Laughren:** Ms Clitheroe is a person of much integrity, in my view. When she came before the committee and we asked her about the statutory debt retirement issue, her responses had committee members scratching their heads, I think it's safe to say, without speaking for others.

**Mr Conway:** There was a pretty colourful legal opinion to go with it.

**Mr Laughren:** Yes. I'm wondering, since you're the guarantor of their debt, whether or not you have played a role in figuring out how to meet the statutory debt requirement without paying down the debt.

**Mr Gourley:** The discussions to date have not dealt specifically with this issue. We know that Hydro has been examining it, and the question has not yet been answered as to how they mean to do it. We don't have all of the information we need in order to see the exact impact.

Unfortunately at this point in time, I can't provide you with any better answer other than certainly I'm aware of the issue and we are going to have to deal with it, but we have not in finance modelled a situation which purports to say, "This is how it can be done." We are discussing with

Hydro how they propose to do it and then we'll examine that once they do it. We have to retain the right to be able to examine their proposed approach and pass judgement on it. If it's appropriate, then obviously we would endorse it and proceed, but until that specific proposal comes forward, we won't be able to comment really.

**Mr Laughren:** If I hear you correctly, and don't let me ever put words in your mouth, you're saying that you will vet their statutory debt retirement plan — some would say scheme — before passing approval on it, and that at the end of the day you do have that clout over Hydro.

**Mr Gourley:** The government certainly does, in respect of the Power Corporation Act, have a very clear authority and obligation to approve their borrowing and financing plans. They will have to be going to market and in that process will have to demonstrate that they have a sound financial plan with which we agree. So our clout, as it were, is very clear and unambiguous. We will ensure that we undertake that review so that we can satisfy ourselves in the first instance, obviously, in the role that we play, but satisfy the external investment community as well.

**Mr Laughren:** I have to tell you, I was really taken aback by Hydro's plans on the statutory debt retirement. I found it really weird, so I'd be very interested in your providing to this committee, if you can, your opinion. They have plans on the statutory debt retirement, there's no question about that. Whether or not they've told you I don't know, but they have plans, and I, and I suspect the committee, would appreciate your views on that.

**Mr Conway:** The deal is to tell finance after the fact. They'll find out, but when they get it done.

**The Chair:** Mr Galt.

**Mr Laughren:** Could I have an answer to that question, Mr Chair?

**The Chair:** You may indeed. I'll pause. Mr Galt, just hold. There was so much side action over there, it was hard to hear if it had been answered or not.

**Mr Gourley:** What I indicated was that once we get a specific plan, we will be evaluating that specific plan. There are a number of alternatives that Hydro has looked at and Ms Clitheroe covered those with you. I think we would reserve our judgement until we see a specific plan and then indicate whether or not it meets the test we would apply to it.

**Mr Doug Galt (Northumberland):** As I sit here and listen to the testimony this morning, I can't help but see the very awkward position we're in. It's going to be very awkward to come up with some good decisions in the right direction. I think maybe we're very, very fortunate that we had somebody like Mr Farlinger, probably in concert was Mr Kupcis, who said, "Enough's enough," and called in the experts to review the problem that we're having with these nuclear plants, and brought this whole thing to a head. Dear knows where it would have gone had that not happened; similarly with the Macdonald commission report on Ontario Hydro in general. That's the message I'm getting here.



We've talked an awful lot this morning about the total debt, \$32.1 billion. We've talked about struggling with a stranded debt and who's going to get hung with that — and it sounds like the ratepayers will — the cost of NAOP being laid on us and then the statutory debt retirement being put on hold and the question about whether that's right or wrong. I guess the people out there whom I'm really concerned about and what they're telling us — you alluded to it in your conclusions and I'd like you to expand more on it — relates to the rating agencies. They're really the ones who control the strings, so to speak. I'd just like you to talk a bit for a few minutes about their casual comments, official comments as they relate to the nuclear asset optimization plan that's out there.

**Mr Gourley:** The rating agencies confirmed all of the ratings they had in place prior to the release of the white paper and prior to the release of the nuclear asset optimization plan.

Subsequent to the release of the nuclear asset optimization plan, there were a number of questions asked and basically the rating agencies all said, "Look, we don't feel comfortable rating either Hydro's credit or Ontario's credit until we see what the future structure of the industry is going to be." You may well say that's an obvious statement, but they clearly said at that time, "We await with interest the white paper."

When the Direction for Change paper did come out, we spent time with them briefing them, holding detailed discussions in concert with Hydro staff. I think it's fair to say that we, through Mr Salerno's offices, are in more frequent contact with rating agencies than others. So we led those discussions and led those reviews and undertook to provide the rating agencies with answers to the questions they asked us.

That ended up essentially in a situation where they said, "Fine, we understand the structure in the future, we understand competition to an agency," and there were four agencies. They indicated basically they're not going to make any comment at this point in time about how future debt that is not guaranteed by the province might be rated. We simply said: "Look, this debt is going to be subject to a market test, so in that respect, we are concerned on the one hand but not concerned about its impact on the province's credit rating because it will not be on the province's credit that this money will be borrowed."

The agencies basically, after affirming our ratings, then outlined their understandings of the new structure of the industry. They feel that the detail in the white paper was sufficient to allow them to continue to rate our bonds. They had alternatives, and those alternatives you would be familiar with, which could have included saying, "We don't have enough information and we're going to consider some form of notice that we're going to look more thoroughly into this." They did not do that. They confirmed our ratings for both short-term and long-term paper, so at least as far as I was concerned, I think we met their test for disclosure, and the questions they asked were all answered.

1140

**Mr Galt:** Are they doing any kind of market analysis in this direction? If so, would it be available to us? Or are they just sitting back waiting to watch the rest of this unfold. The question was relating to, are they doing a market analysis about this whole thing?

**Mr Gourley:** They are very familiar with the electricity industry. In fact, they have some comfort in knowing that the experience with restructuring in the industry in the US has been generally successful and they've been following that closely, so this is not really new for them. The scale is obviously different, because Ontario Hydro is such a large corporation, but the fact that it's being restructured, the fact that we're now applying competition to the industry is actually more reassuring than the current environment simply because of the external tests that will be applied by the market.

**Mr Galt:** So there's that comfort zone, a comfort feeling there that I'm picking up from you, that the rating agencies have with the direction in which we're going.

**Mr Gourley:** Right. They want more details. They would like to know specifically how the stranded debt charge will work, Mr Laughren's questions earlier: "What happens when somebody leaves? Will it be legislated? How much will it be? How long will it last? What's your phase-in? What is an exit fee if you have it? What power do you have to recover it?"

All those details, which we will have to provide eventually, are questions that they want answers to, but which are not necessary for them to say: "Fine. You've clearly said that to the extent there is stranded debt, there will be a stranded charge and we have several options for dealing with them." That's very important for the rating agencies to hear.

I shouldn't speak on behalf of the government, but in the paper we indicate, "The government is prepared to consider the following list of options." The options are clear and they are not without difficulties for the government, but it's indicated it's willing to consider those options, including absorbing, taking on a portion of the debt should that be necessary. So all of those options provide assurance to the rating agencies that we have examined the situation thoroughly and that we're prepared to deal with the consequences of the plan and of the restructuring.

**The Chair:** Very, very quickly.

**Mr Galt:** Just a quick question on the bonds. It is Ontario Hydro that sells the bonds or the province of Ontario that sells the bonds? I know the province underwrites them and guarantees them. Who actually sells them?

**Mr Tony Salerno:** All but about \$3 billion is issued by Hydro with provincial guarantee. There is about \$3.1 billion to \$3.2 billion that was issued by the province with then a back-to-back issue with Hydro.

**The Chair:** Mr Gourley, in response to a question put to you by Mr Laughren and an intervention, I think, from Mr Conway, maybe I could just ask you to elaborate a little bit more. Have you received from Ontario Hydro detailed monthly cash-flow projections for the next two years?

**Mr Gourley:** Detailed monthly cash-flow projections? No.

**The Chair:** Are they to be obtained?

**Mr Gourley:** I don't have them.

**The Chair:** You have no intention to have them?

**Mr Gourley:** No.

**The Chair:** When you receive information from Hydro, when you receive its numbers, particularly around NAOP, for example, do you run independent models and tests of those assumptions or do you take Hydro's assumptions and figures as given to you?

**Mr Gourley:** We take the data and then examine all of the alternatives and see how sensitive they are to the assumptions that have been made. If there are assumptions that have been made and those are reasonable in our view as a projection for future price or a projection for future inflation rates or economic environment demand for electricity and all of that sort of thing, those are parts of our normal questioning of proposals. But it's always in the context of, shall I say, a proposed borrowing plan that Hydro would present to us.

**The Chair:** Have you found the assumptions to be reasonable?

**Mr Gourley:** Yes. Generally speaking, there are some details — and now I'm moving down to the actual borrowing programs — of timing of access to market on which Mr Salerno and his staff at the Ontario Financing Authority would deal with Ontario Hydro specifically. They may have a preference for accessing the market on a particular day or a particular week, and we may indicate that because we are going to the market, we prefer them not to do that or that we don't judge the conditions to be appropriate and would prefer that they not enter the market at that time.

**The Chair:** Assuming the spending for NAOP commences now, will it have the benefit of government guarantee?

**Mr Gourley:** All of the spending under NAOP will have to be judged to the extent that it's going to have to be externally financed. As I indicated earlier, at least \$5 billion of it, I believe, can be financed from internal sources, but that doesn't mean Hydro won't have to be borrowing. They will have to renew maturing debt since they're not going to be paying down the debt and they will have to be borrowing for other specific purposes, and they will share that plan with us. We don't have their plan for next year, but we're aware of their plans over the next few months.

**The Chair:** In your opinion, if the NAOP spending were implemented at this moment, and some may suggest it has been, is it possible to stop that spending?

**Mr Gourley:** My understanding is that the board has absolute control over that spending and that its approval is required before any spending commitments are made.

**The Chair:** And who has control of the board?

**Mr Gourley:** The board has control of the board.

**The Chair:** What specific directives or requests —

**Mr Gourley:** Excuse me, I should say that with respect to the decision I was talking about, the spending,

clearly the board has control of the board. To the extent that any spending decisions require borrowing authority, the Ontario government is responsible and the Ministry of Finance is responsible for approving that borrowing plan.

**The Chair:** That was not an unimportant addendum. Have there been any specific directives or requests given by finance to Hydro to ensure that all alternatives have been looked at and properly evaluated?

**Mr Gourley:** The one letter I quoted from on October 28 I think was very specific and clear on that issue. It's not in the form of a directive; it's in the form of a letter from me to the chief financial officer of Ontario Hydro.

**The Chair:** That is the only directive or guidance that has been given, and that has been subsequent to August 12?

**Mr Gourley:** Well, the letter from the Minister of Environment and Energy was obviously a clear direction.

**The Chair:** A very clear directive. Can I just finalize a question in that regard? When you got up on the morning of August 12, did you go to that meeting?

**Mr Gourley:** No.

**The Chair:** You were not at that meeting. You were not present. All right. You were aware that meeting was to be held?

**Mr Gourley:** Yes.

**The Chair:** When you got up on the morning of August 12 — and I assume it was a bright, sunny day — did you have an expectation, as you tied your tie and prepared for the day's events, that a decision of the magnitude of the NAOP plan would have been approved that day?

**Mr Gourley:** On that day?

**The Chair:** On that day.

**Mr Gourley:** My impression was that the board would be considering the NAOP report and proposal. I use that word advisedly because I have been a member of a board for four years, and the board, at its meetings, is free to take whatever action it wishes to take, and that's the discretion of the board.

1150

**The Chair:** I understand your answer, because we've all served on boards, and so I respect your respect of boards' authorities. I think that's laudable. Having said that, would you on that morning have expected the board to have taken a signal decision of this sort, at that meeting? Did it not strike you as out of the ordinary when you heard the decision had been taken? Was it seen as a very ordinary course of events or was it something that struck you as slightly extraordinary?

**Mr Gourley:** First of all, it was a major change for the corporation — this whole report, the assessment of the report, the implications, investment — a major change before the board. It had to deal with the issue. Going to my own reaction to it: When I saw that the minutes basically said, "This is the direction in which we are proceeding and we are going to examine alternatives," because that is an extension of the minutes, I felt the decision was clear, that they were going to make a planning decision and, to use Mr Conway's characterization of it, that the plan would be modified or adjusted, depending on



the examination of alternatives and costs and details and the implications of the plan.

**The Chair:** At that point you thought it was just a normal unfolding of the world's events.

**Mr Gourley:** It was a normal approach to a major issue, as it were —

**The Chair:** A purely regular step.

**Mr Gourley:** I wouldn't characterize it as normal and regular, you know, "We have this following report." It was a major initiative that was before them and they had to show —

**The Chair:** So it wasn't a normal, regular step.

**Mrs Johns:** We've been hearing about it for months and months.

**The Chair:** That's the point I'm raising. There has been some unfolding, is what you are saying, and this seems to be a —

**Mr Gourley:** They had had reports. They had had the nuclear review committee. The issue had been raised. I made a comment earlier about the fact that the ratings for Ontario Hydro's generating plants had, in a sense, heretofore been not quite secret, but near secret; that it wasn't a matter of public knowledge that these plants were at one time, and I'll say always, among the top 10 in the world, and suddenly, somehow, they appear to have been changed in their nature or their rating has been changed so that they're very near the bottom of the rating scale.

I wouldn't regard that as a normal event. My point is that this whole process has led to an opening up of that, which I believe is very healthy and very good for the taxpayers, the ratepayers and the people of Ontario. I think it's a good development that this issue is out in the way it is and in the detail in which it's being raised.

**The Chair:** It's a helpful place then to conclude the evidence for this morning, and I do appreciate your testimony.

**Mr Conway:** You should have a screening of the film *The Madness of George III*.

**The Chair:** Are you feeling your gout this morning?

**Mr Conway:** The deputy's last response, which is an interesting one, I think is sort of —

**The Chair:** Mr Gourley, I thank you very much for having attended upon the committee and for your testimony. It has been very helpful, and for those who are with us, thank you very much. The committee will now stand adjourned until 3:30 this afternoon. You'll note that we have the appropriate deputations, including the Ministry of the Environment.

*The committee recessed from 1154 to 1551.*

#### NIGEL ROULET

**The Chair:** The committee will please be in order. We have two witnesses this afternoon before the select committee. Our first witness is Dr Nigel Roulet. We're pleased to have you with us today. The technique will be one of simply opening matters up for you to make a presentation, and then we'll go by caucus for questioning. For

the purposes of Hansard, if you would simply be good enough to identify yourself, then let's begin.

**Dr Nigel Roulet:** My name is Nigel Roulet. I'm a professor at McGill University and director of the Centre for Climate and Global Change Research at McGill. On very short notice, because I was supposed to be here in Toronto giving another presentation, I was asked to delineate some of the broader issues that might be related to fossil fuel emissions and some energy decisions you have before you. To comment on those emissions and their impact on the decisions that need to be made and to examine the increases in CO<sub>2</sub> that might occur because of switching energy sources requires first to understand a bit about the central issues in the climate change debate.

There are three questions I think you have to satisfy yourself with. The first question is whether the climate is in fact changing. The evidence that has been obtained so far is that the temperature has increased over the last 100 years approximately half a degree to one degree C. This is an unprecedented rate of increase in temperature, based on evidence looking at ice core records and various things like this.

The second question you have to address once you've established it's an unusual temperature increase is, what is the potential cause of that temperature increase? There are two lines of evidence I think we need to look at to examine this. The first suggestion would be greenhouse gases. There is irrefutable evidence that has been collected since 1958 on the rate of increase of greenhouse gases in the atmosphere. Why I say this is irrefutable is because it's simply a measurement. It's done at about 14 stations around the world and there's no question that CO<sub>2</sub>, methane and nitrous oxide are increasing.

To put that in context, the current concentration of CO<sub>2</sub> in the atmosphere is 372 parts per million. From the ice core records, that concentration has not been observed in the last quarter of a million years. The highest concentration over that period of time was 280 parts per million. So we definitely have larger CO<sub>2</sub> concentrations. The same numbers are true for methane, which has approximately doubled, and also nitrous oxide. There is strong statistical evidence to suggest that those increases in greenhouse gases are correlated with increases in temperature, but that does not necessarily mean a cause and effect.

There are two pieces of research that have come to the forefront recently, since 1993: One is work done by a scientist named David Thomson at AT&T Bell Laboratories in Murray Hill, New Jersey. He is a signal analyst. He has looked at the relationship between the increasing carbon dioxide, methane and nitrous oxide in the atmosphere and the other natural factors that affect climate, analysed them statistically in relationship to various different properties and has come up with the number that approximately 70% of the explanation for the temperature increase over the last 100 years lies in the increase in greenhouse gases.

The second situation that has arisen in the last two years that has given more credence to evidence for global warming due to greenhouse gases has been in the changes

in the models that are used by scientists to examine climate change. These models are called GCMs, or general circulation models. Up until two years ago, those models had a very difficult time predicting the observed temperature changes over the last 100 years. The models predicted too great a temperature change based on the greenhouse gases that were emitted over that period of time. However, it has also been realized that at the same time we're emitting greenhouse gases, we're also emitting other gases that counteract greenhouse gases. One of the gases, for example, is sulphate. Once those gases were incorporated into the models, we saw a tremendous improvement in the predictability of the models, and now we can actually reconstruct the temperature changes over the past 100 years very well with these changes in the models. That provides additional support to greenhouse gases having an impact on temperature.

Looking at this evidence, if you arrive at the conclusion that at least we've had a temperature change and it's probably greenhouse gases that are doing it, then we need to look at the sources of CO<sub>2</sub> that exist in the current global carbon cycle. There's absolutely no question that there is an imbalance in the global carbon cycle at the present time. That is because of the burning of fossil fuels, and the production of cement is putting carbon into the atmosphere at a rate of approximately — and these units are very large — 5.5 gigatonnes of carbon per year. We know that approximately one third to one half of that is going into increasing concentrations in the atmosphere. The other half to two thirds is going back into the oceans and back into the landscape.

That number of 5.5 gigatonnes of carbon on a global basis is derived from fossil fuels. That is the number you would need to use to compare, on an international scale, what the impact of increased emissions would be from, let's say, Ontario Hydro if they were to embark on this strategy, and there are some numbers on the national scale that we would need to look at. I got these numbers to work with from Ontario Hydro just yesterday, and I got the last set of numbers from the Atmospheric Environment Service at 10 o'clock this morning to look at.

In a 1997 document, Ontario Hydro reported that their 1990 baseline emissions, the emissions that all their activities add to the atmosphere in carbon dioxide, was 26 teragrams. Teragram is written "Tg," and a teragram is 10 to the 12 grams. In 1996, they reported a number that was much lower than that, 18.6 teragrams of CO<sub>2</sub>. Their projection for the year 2000 is that this number, with their changes, would go to 30 teragrams of CO<sub>2</sub>. That's an increase of approximately 11 teragrams of CO<sub>2</sub>, or about a 40% increase.

To put that in context, on the Canadian scene, in 1992 the estimate, based on the state of environment reporting, was that Canada was emitting approximately 468 megatonnes of CO<sub>2</sub> a year. I use that number because that's what the federal government reports, and you can get lost in the units very quickly on this. A megatonne is actually equal to a teragram, so the two numbers are the same.

#### 1600

If you take the 1990 baseline number that Ontario Hydro reports and you want to compare it with the Canadian total for the national picture, you would take the number of 26 teragrams and put it over 468. That would tell you that Ontario Hydro is responsible for about 6% of the national emissions of fossil fuels.

If you did the calculation for the 1996 baseline number of 18.6 teragrams — and the number for 1995 that I got from the Atmospheric Environment Service this morning is that Canada is emitting in the fossil fuel sector 499.6 — we call that 500 — teragrams of CO<sub>2</sub>. That means that Ontario Hydro in 1996 is responsible for 4% of the national emissions of CO<sub>2</sub>.

If we project to the year 2000 using the number of 30 teragrams as Ontario Hydro's number, because obviously we don't know what the rate of CO<sub>2</sub> emissions would be on the national scene at that time in the future, if you look at the difference of Canada from 1992 to 1995, there was an increase of approximately 10 teragrams of CO<sub>2</sub> per year on the national scene. What I've done is just prorate that forward to come up with the number that Canada probably would be emitting in the year 2000 — 550 teragrams. I've put Ontario Hydro's estimate of 30 teragrams over top of that, and that means Ontario Hydro would be emitting approximately 6% of the national emissions in fossil fuels. They would return to the 6% emission level that they had in 1990 as a proportion of the national emissions. I should point out, though, that there is an absolute increase in CO<sub>2</sub> emissions that Ontario Hydro is reporting of approximately four teragrams over its 1990 base level.

You can do those calculations. Just to put them into context, of the total fossil fuel emissions in Canada, approximately 22% of it is derived from power plants. If you then go through and do the analysis again, it means that Ontario Hydro would account in 1990 for approximately 25% of the fossil fuel emissions from power plants. In 1996 that number would have dropped to 18%, and using their 2000 projections, it would rise up to about 29% of the national emissions.

**Mr Galt:** Could I get some clarification on weight? You've moved back and forth from carbon to carbon dioxide. Are you talking about the carbon from the carbon dioxide or the total weight of the carbon dioxide?

**Dr Roulet:** I should make that perfectly clear. That was not clear to me until I actually got a response from Ontario Hydro today. All their numbers are reported in grams of CO<sub>2</sub>; not grams of carbon that's in the CO<sub>2</sub>, but grams of CO<sub>2</sub>. The numbers that I'm giving you, if you take those and multiply them by 12 over 44, because the carbon atom weighs 12 grams of the carbon molecule, which is 44 grams, that's how you would translate it into carbon.

**Mr Galt:** Weight.

**Dr Roulet:** Yes, carbon weight. The multiple is I think 3.7 — no, 0.27 is the multiplier that you would use. I'm reporting the numbers all in mass of CO<sub>2</sub>.

**Mr Galt:** Even though you're saying carbon, you're talking about CO<sub>2</sub> totals.



**Dr Roulet:** Yes. I apologize for that.

**Mr Galt:** That's okay. I just wasn't sure. I thought that's what was going on but I wasn't absolutely sure.

**Dr Roulet:** The problem is that Ontario Hydro works in CO<sub>2</sub> and the federal government works in CO<sub>2</sub> mass. But those are about the only two agencies that do that. Most of us in the climate change world actually work in the carbons, though. My apology.

**Mr Galt:** Thanks very much.

**Dr Roulet:** What that means is that in fact there would be an increase in CO<sub>2</sub> emissions and it would have a slight impact on the national scene in terms of the total emissions from Canada.

You can go through and do the very same calculations to do what the impact of that change would be on global emissions. The number I gave you for fossil fuel emissions globally — I am moving into carbon units now because those are the numbers that are reported — of 5.5 gigatonnes of carbon emitted by fossil fuel and cement production, if you went through and redid the calculations, Ontario Hydro is responsible for a minuscule amount of CO<sub>2</sub> on the global scene, and it works out to approximately 0.1% of global emissions. In fact, if you round to the nearest significant digit any policy that Ontario Hydro does, because the numbers are so large globally, it has no effect on the overall global numbers.

In terms of greenhouse gas emissions, the other issue that I was asked to comment on is, how would this fare with Canada's commitments for greenhouse gas abatement? That's also a bit of a hypothetical question because we really don't know at the present time what Canada is going to agree to at Kyoto. But if we take the press information that came out of the meeting in Regina a week ago, there does seem to be some indication that the consensus would be to try and obtain 1990 levels of emissions by the year 2010. Canada had agreed at Rio to 1990 emissions by the year 2000, but the indication from the Regina meeting is that this may go to the default of 2010, which I believe is what the Americans are also arguing for.

By the year 2000, Ontario Hydro, using its own numbers, would be above its 1990 level of emissions. To get back to their 1990 level of emissions they would have to find some way of reducing four teragrams of CO<sub>2</sub> emissions over the decade between the year 2000 to 2010. That's on the assumption — obviously I've done the calculations — that they would maintain their fossil fuel program that they have said would be in place. The numbers they've given me are from 1997 to the year 2000. That would mean they would be approximately 10% over their target level for 1990.

**The Chair:** Thank you very much, Dr Roulet. I appreciate that very much. One point: It would be helpful I think, and our legislative researcher nudged me in this regard, if we could have some of your deputation in writing. Some of those figures would be very helpful. While Dr Galt may have had trouble struggling with some of the balances there, you made it clear to others of us so succinctly. I tease him when I say that. It would be helpful to actually see this in writing, if you wouldn't mind.

**Dr Roulet:** I'd be very happy to produce a hard copy for you.

**The Chair:** Thank you. I appreciate Dr Galt raising that question for us and clarifying it. We will proceed with questioning by caucus in rotation, five minutes per caucus.

**Mr Laughren:** I think I enjoyed your presentation. Have you read Ontario Hydro's nuclear recovery program?

**Dr Roulet:** No, I have not. The material I have read is the material that Ontario Hydro sent me on the document that they prepared for the voluntary challenge program for meeting greenhouse gas emission targets. I have not read the document you're referring to.

**Mr Laughren:** They claimed in an appearance before the committee that they could achieve their voluntary emissions agreement with the Ministry of Environment. I believe that's what they told us. Are you familiar with that agreement? Is that what you were referring to?

**Dr Roulet:** The voluntary registry program is actually within NR Can, the federal government —

**Mr Laughren:** With what?

**Dr Roulet:** Natural Resources Canada are the people who run that program.

**Mr Laughren:** I see. I think I heard you say towards the end of your remarks that there would be 10% — am I mixing up different agreements here?

**Dr Roulet:** No.

**Mr Laughren:** — 10% above that voluntary agreement with the federal government.

1610

**Dr Roulet:** No. The voluntary agreement is that they would be emitting at their 1990 levels. That's the target they're supposed to hit. That number was 26 teragrams of CO<sub>2</sub>, which is what they were emitting in 1990. The 2000 number that they provided for me was 30 teragrams, which is four teragrams above that.

**Mr Laughren:** That's your 40%. They go from the goal of 26, in the year 2000, to 30.

**Dr Roulet:** Four teragrams over 26 is the amount they are above their target.

**Mr Laughren:** So am I right, then, that when Ontario Hydro told us they could meet that — you're saying they can't, that they'll be above it?

**Dr Roulet:** The number they provided for me was a number they would reach in the year 2000.

**Mr Laughren:** Under their present plan.

**Dr Roulet:** Yes. That's the estimate they gave me.

**Mr Laughren:** With their recovery plan, with the starting up of the fossil stations.

**Dr Roulet:** Yes.

**Mr Laughren:** Maybe the folks can help me here, but it seems to me they were quite specific that they could come pretty close to the levels they had predicted, but they would be able to achieve them. Total acid gas, 215 all the way through — well, 160 is the other one. The limit is 215, right? I'm sorry, I'm not reading this correctly, because I was sure they said they could meet it; you're saying they can't. That's really what I'm trying to get at.

**Dr Roulet:** What I'm saying is the numbers they project for the year 1997 to the year 2000 is what they gave me. It says it will increase to a maximum level of approximately 30 teragrams per year. It says: "Beyond the year 2000, the forecast level of greenhouse gas emissions from Ontario Hydro and the future electricity sector will depend upon the return of nuclear units to service and the evolution of a competitive supply-side marketplace." That's for their post-2000 projections that they are making. On the bar graph they provided for me, they have also suggested a corporate strategy for management of greenhouse gas emissions. What they are talking about is to stabilize net greenhouse gas emissions at 1990 levels by the year 2000 and to further reduce them by 10% by the year 2005. If they did it by 2005, they would be back to their 1990 level.

**Mr Laughren:** To 26.

**Dr Roulet:** They'd be back to 26. If they reduced by 10% of their 2000 level, they would be back down by the year 2005.

The question that comes in, in interpreting this, is whether you set the year 2000 as the target date for meeting your emission or whether you set the year 2010 to meet your target.

**Mr Laughren:** But Hydro already had a target and an agreement for the year 2000 — am I right? — that they would be back to 26 by the year 2000. That was their agreement with the federal government, wasn't it? Am I getting something mixed up here? Because that's what I understood you to say.

**Dr Roulet:** What I'm saying is that Canada has agreed to try and return itself to the numbers for 1990.

**Mr Laughren:** I understand that.

**Dr Roulet:** As part of the voluntary registry program, people are asking the corporations to return to their 1990 levels.

**Mr Laughren:** Let me try one last time to nail this down. Ontario Hydro — we're just talking about Ontario Hydro now — was at 26 teragrams in 1990. They had a voluntary agreement with the federal government, the Department of Natural Resources, to be back to that number by the year 2000. Is that correct?

**Dr Roulet:** I don't have that voluntary agreement in front of me. What I do have is the letter they wrote to the Ontario Ministry of Energy, which I think updates their voluntary registered action plan. I don't have the actual plan in front of me; what I've got is the update to that. To answer your question, I can't say whether that's what they agreed to, no.

**Mr Laughren:** I wonder if we could get that clarified from Hydro, to what extent they were correct when they said they would continue to meet their voluntary agreement with the federal government and to what extent they cannot, because I'm hearing different messages.

**The Chair:** We'll certainly ask.

**Mr Galt:** Thanks for your presentation. I'd like to try and get sorted out in my mind a little bit — in firing up the fossil fuel plants, they'll be using gas, oil and coal. I'm certainly led to believe by all kinds of information on gas

that it's supposed to be an awful lot cleaner. When it comes to the release of CO<sub>2</sub> per calorie or joule or whatever, how much cleaner is it in greenhouse gases versus coal and oil? Sulphur is another thing; I'm zeroing in more on the CO<sub>2</sub> problem.

**Dr Roulet:** You'd actually have to ask a combustion engineer for those specific numbers. There's absolutely no question, though, that on a unit of energy produced, natural gas is cleaner than oil and oil is cleaner than coal.

**Mr Galt:** As it relates to CO<sub>2</sub>.

**Dr Roulet:** Yes, as it relates to CO<sub>2</sub>.

**Mr Galt:** I'm just trying to get a feeling here. Is it significantly better, or is it marginally? Do you have any feelings that way? Other than that they say it's cleaner, I've never got a feeling. Is it marked?

**Dr Roulet:** I don't know the numbers on that, so I don't know whether or not I would argue it's significantly cleaner.

**Mr Galt:** It might be beneficial for us to find out, because we might want to recommend that more of the burners be converted to gas than allowed to stay with coal, as one of the recommendations.

**Dr Roulet:** Definitely, that would be a good recommendation.

**Mr Galt:** The other question I'd like to try to sort out here — we've tried once or twice before — has to do with total cost to society of whatever the pollutants happen to be. It varies tremendously. We look at the nuclear plant and we talk about decommissioning and the storage of the spent fuel in whatever manner, and that still hasn't really been sorted out yet, but we're saying all those costs have to go to those nuclear plants. Then we have the fossil fuel plants that create a greenhouse gas effect from the CO<sub>2</sub>, and that has a cost to society.

How do you relate that cost to society with the fossil fuel plants versus that of the nuclear plants, to put them both on a level playing field environmentally? Is there any formula out there, any assumptions that can be made? Is there any way? I'm thinking also of the competitive market from the white paper.

**Dr Roulet:** I think you've actually hit the crux of the problem. I'm not an economist.

**Mr Conway:** He's a geographer. Mike Harris might like that.

**Dr Roulet:** There have been some extensive studies done on the estimated costs of reducing greenhouse gas emissions in terms of the gross domestic product and things like this, and there have also been quite a few studies done — and a number of them were done for the intergovernmental panel on climate change, from the United Nations environmental program and the World Meteorological Organization — on the costs of the believed impacts from climate change. Those costs range considerably; it depends on the assumptions that are made.

The suggestions are that the cost of climate change, with the doubling of CO<sub>2</sub>, can range anywhere from 0% to 3% of gross domestic product. The estimated cost of reducing greenhouse gas emissions, the upper limit that I've heard is approximately 3% of gross domestic product.



There is no one formula that people use; in fact, there are many different formulas that are used and all the intangibles that go into those types of things. If you want a more precise answer, it would be prudent to refer to an economist who does this work.

1620

**Mr Galt:** Thank you very much. I think maybe we should try to get the information on CO<sub>2</sub> releases from gas versus coal versus oil if at all possible. That would be helpful in our recommendations down the road, Mr Chair.

**The Chair:** We'll certainly make sure they do that.

**Mr Conway:** Thank you, Dr Roulet. Mr Galt raises some very good and central questions. I want to come back to those in a moment, but broadly speaking this committee has a responsibility to make some comment and recommendation around, among other things, the efficacy of this so-called nuclear recovery plan. Basically what the recovery plan turns on is that the utility has decided it's got some real trouble on the nuclear generating side, so they intend to take and lay up for some time seven reactors that give a total of about 4,000 megawatts and to replace those 4,000 megawatts with a combination of increased production from their own fossil, gas-fired and presumably some hydroelectric —

**Mrs Johns:** Purchases from other sources.

**Mr Conway:** — and purchases from outside of the jurisdiction.

When that announcement was made, national networks showed people troubled reactors on the one hand and then the next thing people living across the country would see were these fossil plants spewing all kinds of gunk into the stifling humidity of a central Canadian summer.

One of the questions I think we have to satisfy — we're just generalists; I'm certainly a generalist — and one of the reasons we're pleased to have you here is to give us some advice around the public concern that will be out there that at least in the short term there are going to be, if this plan is implemented and the mix of it, as Mr Galt made plain, is not yet determined — how much gas-fired versus coal-fired we just don't know.

On the basis of the numbers you cited in response to Mr Laughren's question, I conclude that Hydro will over the next three years, from 1997 to the year 2000, lose any of the advantages they've gained over the last five or six years in reducing their percentages — they were at 6%, they came down to 4%, they're back up at 6% — that they will still be, as a percentage, using your extrapolation, at 6%, which is where they were five, six, seven years ago, but that they're still broadly speaking going to be within tolerable or agreed-to limits. Is that a fair conclusion on what you've told Mr Laughren?

**Dr Roulet:** Can you define for me what you mean by "tolerable"?

**Mr Conway:** By that I mean the agreements that Hydro has voluntarily acceded to, particularly on CO<sub>2</sub>.

**Dr Roulet:** Given the numbers they have given me, I think they will be close to their targets plus this 10% factor. One would attempt to argue with them or encourage them to try and do whatever they can do in terms of

efficiency or a mix of fuel or various other things to reduce that.

**Mr Conway:** In response to Mr Galt's observations, that would mean from your point of view telling the utility, in terms of substitute power, to put as much reliance on additional hydraulic, additional gas-fired, and stay away from coal of any kind to the greatest extent possible, right?

**Dr Roulet:** Yes, and from a greenhouse gas perspective that includes purchases of energy from those sources also.

**Mrs Johns:** Ohio Valley.

**Mr Conway:** Ms Johns rightly observes that probably means staying away from buying the so-called controversial, dirty, coal-fired electricity out of the Ohio Valley.

**Dr Roulet:** From a climate perspective, I would argue that's not a wise thing to do.

**Mr Conway:** Are there other issues? Your expertise is in the area of climate issues. We had representation some weeks ago now from a group called the Ontario Clean Air Alliance, Jack Gibbons. You may know Jack. He appeared before us back on October 20, now a month ago. His presentation touched on greenhouse gas emissions but he went on to talk about carcinogens and sulphur dioxide emissions. Have you any expertise or any commentary on any of those collateral issues?

**Dr Roulet:** No. I've done no work in, for example, the oxidants, in sulphur or in nitrogen, so I don't know the numbers —

**Mr Conway:** That's fine. Back to the CO<sub>2</sub> emissions, which are the key concern in the greenhouse gas question. One of the difficulties I think in trying to assess the plan that we have to pass some judgement on is the mix of those ingredients. There is a lot of uncertainty. The exigency of the moment may in fact force the utility to do some things they don't want to do, but Ontario is a big, empty, cold place in the middle of winter. Heat must be there and the lights have to be on.

From your cursory look at these data, if there was some unexpected development, on the basis of what you've seen, could that profile of Hydro's picture, particularly between 1997 and 2000, stray into quite unattractive zones? You've crunched the numbers and you've said, in response to Mr Laughren, 4% to 6%. Mind you, there was a substantial increase as you get towards 2000 over where we were in, say, 1994, looking just at Ontario's domestic situation, pulling away from the national profile.

What I'm trying to get at here is if you got some major surprises, for example, if you couldn't get as much natural-gas-fired substitute power as you wanted, and if you didn't get the performance out of some of your cleaner alternatives in the province, and you had to buy more of that dirty coal-fired electricity out of, say, Ohio in the short term, could that really skew some of those numbers?

**Dr Roulet:** What that would do is increase CO<sub>2</sub> emissions. By what percentage would depend on whatever mix you've got to do. But I think at that point in time you're on a margin, so it would be a small increase over the large increase already.

The other thing that should be pointed out is Ontario Hydro, in terms of its emissions, in terms of unit power production, the obligations for reducing CO<sub>2</sub> emissions, the 1990 number is an important number to look at. The fact that they reduced emissions significantly into 1996 is probably a result of some of the practices they have had in the sense that they have had large investment, from a greenhouse gas perspective, in relatively clean energy sources. That's not an endorsement for doing the alternative way they have produced energy, but from a greenhouse gas perspective that is a much better avenue to go.

**Mr Laughren:** This committee is to complete its report in the next 10 days and make some recommendations on Hydro's stated intentions. We are going to, I assume, be wrestling with this whole issue of alternative fuels. I assume that someone like you would be happy if we recommended that all substitute fuel be turbine natural gas fuel as opposed to coal or anything else?

1630

**Dr Roulet:** I suggest the route to go from the greenhouse gas perspective is to try and maximize your yield of energy with the minimal amount of emissions possible. That would mean, when you talk to your fuel engineers, get the best blend of fuel that you can get to do that.

**Mr Laughren:** Wouldn't that be the natural gas?

**Dr Roulet:** As I've said, I think you need to get someone who is an expert in that area.

**Mr Conway:** Or nuclear.

**Mr Laughren:** Yes, I suppose the other is nuclear. You don't have the emissions there, do you?

**Dr Roulet:** No, the emissions from nuclear power facilities of greenhouse gas are very low.

**Mr Laughren:** You're being very cautious about making any suggestions for us here as to what we should be doing when we make our recommendations.

**Mr Conway:** He's not even an economist.

**Mr Laughren:** They don't hesitate to make recommendations. What I want to know is, when you make recommendations like that, do you have a sense of the market out there at all, or is that not something that's in your bailiwick?

**Dr Roulet:** No. There are certainly market implications in any decision that's made on what you do with fossil fuels. There's absolutely no question about that. But what I am is a climatologist who is saying that what you should try and do is minimize your greenhouse gas emissions.

**Mr Laughren:** But you know that we have to wrestle not just with emissions; we have to wrestle with supply.

**Dr Roulet:** That's why you're there and I'm here.

**Mr Laughren:** You're here to give us advice.

**Dr Roulet:** My advice for you is to produce your energy in the cleanest possible way you can for greenhouse gas emissions.

**Mrs Johns:** I have one question and then I'll pass my time over. I followed your numbers this time around. I learned that in Ontario, until we had this potential problem at Ontario Hydro, we were working at reducing our teragram limits, emissions. I want to know why Canada is

increasing them. Is not the whole country working towards this? How is it that we're going down percentage-wise and Canada as a whole is going up? What is it that Canada isn't able to reduce their emissions — that might be global. Is that global or was that Canada you gave me, 468?

**Dr Roulet:** That's Canada.

**Mrs Johns:** Why have they been going up and Ontario Hydro has been able to get theirs down?

**Dr Roulet:** As I said earlier today, economic productivity is very closely tied to emissions of fossil fuels, for example, and as the economy picks up, there are more fossil fuels emitted as a result of increased production and those types of things. From a greenhouse gas perspective, the recession was actually a fairly good thing because it actually reduced emissions.

**Mrs Johns:** Oh great. You and Floyd should be at the same place.

**Dr Roulet:** There's no question that fossil fuel emissions are tied to economic production.

**Mrs Johns:** I guess my argument here, and it's not an argument to you, but my argument is that I believe — because you come from Quebec, you may not believe the same thing as I do — that Ontario is the engine of Canada and if Ontario can manage to do this because we have most of the manufacturing and most the productivity and it's all generated basically by Ontario Hydro and their ability to give us power, then it seems strange to me that we can do that and Canada can't. From that standpoint, I guess that argument doesn't really help us in this kind of discussion today so I'll just let that go and I'll let Barb speak to her question.

**Mrs Fisher:** It's sort of on the same line, actually, and more concerned about the assumption of 550 megatonnes that you talk about by the year 2000. We went 468, 499.6 and 550 and I think you were doing that incrementally on the basis of 10-megatonne-per-year increases.

**Dr Roulet:** The number 599 was the 1995 number.

**Mrs Fisher:** It's 499.

**Dr Roulet:** Yes, 499.

**Mrs Fisher:** You're speculating 550 for 2000. My problem with that is if we take a look in the bigger picture, the global, and let's talk North America right now, and if we were to concede that in fact perhaps the US might be ahead of us in terms of its clean air legislative imposition, which it is, then I would suggest that maybe, if Canada is anywhere near getting its act together, which it's slow in doing, it won't be 550, and therefore Ontario Hydro won't equate to its worst-case scenario of 1990 if we allow this to go forward. I would speculate that you're going to see in the range of 10. Let's assume for a second we hold our ground.

**Dr Roulet:** Ten what?

**Mrs Fisher:** Ten per cent of national emission of CO<sub>2</sub>. If we impose the program that —

**Dr Roulet:** It wouldn't be 10% if you put 30 over 500.

**Mrs Fisher:** Right. It's worse. Okay. The point I'm making is that it's hypothetical, I agree, and I understand that you had to come from somewhere in term of fore-



casting, but if the national government does what it said it was going to do, and if Kyoto does anything in terms of reaffirming that 2010 isn't the window and that instead it is closer to 2000, and if it can be shown that Canada is not pulling its weight compared to its American neighbour, we could be in a worse situation, number one, in Canada, but even worse because of Ontario Hydro. My question to you then is, to get back to this emission issue and given your profession, would that not be a better argument for nuclear rehabilitation as opposed to coal, to some type of conversion out there about 2000, if I recall the plan, to gas?

**Dr Roulet:** It's a better argument as far as the CO<sub>2</sub> emissions are concerned; you're correct on that.

**Mrs Fisher:** On that basis — I've asked this question of a number of people who have come before us; I'm not trying to be imposing on you — then what would you suggest? If people continue to do this, should there be a penalty paid? If we look at the balance of choice between nuclear or fossil-burning fuels, should there not be a penalty for those who continue to fossil-burn when we know in the end that we have to penalize, for decommissioning and long-term high-level waste storage, the nuclear industry? If we're going to make things competitive, even if we're worried about economics only and how we can finance this problem, would you argue in favour of nuclear production or fossil-fuel-burn production?

**Dr Roulet:** What vehicle is used to reduce greenhouse gas emissions — you're talking about penalties and things like this. A whole series of options is available that could be used for that, and I think a lot of people are discussing those. It actually seems to be the major political debate in Canada today, over making commitments, and I think the pros and cons of each of those have to be weighed. That's a public policy decision, not a climatological decision.

**Mrs Fisher:** Take the dollars out of it —

**The Chair:** Thank you very much, Mrs Fisher.

**Mrs Fisher:** Can I just finish that one last point?

**The Chair:** We really have gone well beyond your time, Mrs. Fisher, but if you ask very quickly and very precisely, I'll certainly let you ask the question.

**Mrs Fisher:** It'll be very quick. Taking the dollars out of it and not influencing the political decision, with your background and your profession, what would you recommend to this committee if it only had to worry about the environment?

**Dr Roulet:** I would have to be competent to assess the environmental implications in the nuclear power versus those in the greenhouse gas question, which I'm not competent to do.

**Mr Kwinter:** Dr Roulet, I'm going to play devil's advocate. I've been listening to you and I'm curious about one of your statistics. You gave us the statistics from 1990, 1992 and then what the projections are for the year 2000. What was happening is that the total emissions were gradually going up, but Hydro was targeting 6%, then it went down to 4%, and expects that by the year 2000 it's going to have 6% of the total Canadian emissions. Is that right?

**Dr Roulet:** Yes.

**Mr Kwinter:** Then you went on to say that the total Canadian emissions, compared to the global emissions, were sort of statistically unreportable. It was like 0.1%.

**Dr Roulet:** No, no. I said that Ontario Hydro's numbers, if you take that number of 26 teragrams or 30 teragrams, whichever number you use, relative to the total global emissions for fossil fuel combustion in cement, it's a very small number. It's around the 0.1% level.

**Mr Kwinter:** Oh, I'm sorry. So that wasn't Canadian; that was Ontario.

**Dr Roulet:** The Canadian numbers are certainly not insignificant in terms of the absolute numbers, and on a per capita basis they are very significant.

1640

**Mr Kwinter:** But Ontario Hydro's numbers are not?

**Dr Roulet:** Ontario Hydro is one contributor to that national number. In terms of the total overall emissions, Ontario's emissions, depending on what year you're using in doing your comparison, are somewhere between 4% and 6%.

**Mr Kwinter:** That's what I don't understand. What I'm trying to get at is, you're saying that that 4% to 6% is the percentage of Canadian emissions?

**Dr Roulet:** Of Canadian emissions of CO<sub>2</sub>. Yes, right.

**Mr Kwinter:** Okay, and what I'm saying is that Ontario Hydro's total emissions globally are 0.1%.

**Dr Roulet:** Yes.

**Mr Kwinter:** The reason I'm asking is that we are taking a look at what the alternative fuel sources are going to do to greenhouses gases, what they're going to do to Hydro's decision, and yet you are saying it's such a minute number. Is that a concern?

**Dr Roulet:** Yes. The thing is that the global emissions of CO<sub>2</sub> are made up of millions of minute numbers. There's no single smoking gun in this issue. The problem is that it is made up of millions of relatively small sources that, when you add them together nationally, make up pretty significant numbers. What is going to be required is to reduce the emissions from all those sources. A solution is not going to be to find one or two of them to remove; you need to reduce all of them.

**Mr Conway:** And on that, let me just be clear. If you look at the sources of energy generation that we've traditionally relied on, we range from hydroelectric over here to nuclear over here with gas-fired and coal-fired thermal plants in the middle. Those are the four traditional sources of electrical generation in Ontario. I want to be clear. Thinking about greenhouse gas emissions, they range from bad — the worst is coal. The best would be what, hydroelectric?

**Dr Roulet:** There is some evidence for hydroelectric and in fact this is some research that we've done ourselves —

**Mr Conway:** We don't have much time. I don't want to take all of Mr Kwinter's time. I've got four sources of generation. You told us we have to make the choices. I'm ready to make some choices. You're a professional when it comes to climatology. We've got four of these choices. With a view to greenhouse gas concerns, rank in order of

best to worst those four sources. If they are the obvious ones, I think I've got them: hydroelectric, gas-fired electric, coal-fired electric and nuclear. Best to worse with a view to greenhouse gas.

**Dr Roulet:** I think it would go nuclear, hydro, gas, coal.

**Mr Conway:** That's clear in my mind. Thank you.

**The Chair:** Mr Laughren, you began the cycle. We'll go around with one question each because the deputants are not yet here. Okay, one round and one question each as we go around. Mr Laughren.

**Mr Laughren:** I'm trying to think of how —

**The Chair:** I'm not forcing you into that.

**Mr Laughren:** No, I'm trying to think of how to work four questions into one. Where does Ontario Hydro rank as a producer of greenhouse gases?

**Dr Roulet:** I don't know. I don't have the numbers for the other — presuming you're asking me to compare against other utilities. Is that what you are asking me to do?

**Mr Laughren:** Yes.

**Dr Roulet:** I don't have the numbers on the other utilities to be able to do that.

**Mr Laughren:** Do you know where they stand in a rank of Ontario, not with other utilities, obviously, but other sources of greenhouse gases? They'd be number one, wouldn't they?

**Dr Roulet:** I don't know that. I would assume that they're very high but I don't know that.

**The Chair:** Thank you, Mr Laughren. Mr Galt.

**Mr Galt:** Oh, are you still going around?

**The Chair:** One question.

**Mr Galt:** Hydro is talking about some emissions trading. Of course, in emissions trading you're always ratcheting down. What are your views on some of the emissions trading and what's being done there with new equipment and moving in that direction? Do you have any thoughts when it comes to CO<sub>2</sub> production? Is there a lot of advantage in working on emissions trading? First, "emissions trading" sounds kind of dirty, but it's one way of ratcheting things down. Do you have any thoughts on that, with greenhouse gases, particularly as it relates to Ontario Hydro?

**Dr Roulet:** No. In the information I have seen presented on that, there are economic advantages and disadvantages to it. But I don't know the specifics on that.

**The Chair:** Mr Kwinter, final question.

**Mr Kwinter:** In your statistics, what you're really showing is that the pie keeps getting bigger, but notwithstanding that, Ontario Hydro has got 6% of it, then it went to 4%, and it's now targeting for 6%. What are your feelings about, rather than using a percentage of the total pie, basing targets on actual emissions, so that regardless of whether the pie gets bigger, if you maintain, you'll get a smaller percentage?

**Dr Roulet:** That's the point I made right at the very beginning, that the percentages are not good numbers to use. The number you want to compare Ontario Hydro's number to is the 1990 number. That's the number you

want to compare it with. You want to look at that 26 teragrams of CO<sub>2</sub>, and if Canada agreed to the 2000 or 2010 target date for returning to 1990 emissions, and let's say everybody was requested to return to those levels, then that's 26 teragrams of CO<sub>2</sub> that Ontario should be aiming for.

**The Chair:** Dr Roulet, thank you. Just before you complete your evidence, may I ask you to comment. There's been a series of television ads that I have watched, emanating from the US, that have bemused me, to say the least. You twigged my recollection of that with your comments that there is no smoking gun, there is in fact just a series of points of origin, small in number, that have added up to a considerable impact upon the climate. Can you comment on those ads?

Can you also comment in terms of this nation's inability to meet the real agreement and how we may find a way to restate our position in any less than an embarrassing way at Kyoto and what it means in terms of those ads, where it seems as though there are some very strong lobbyists at work trying to deflect the American, in that instance, reductions according to the real agreements and what that means for us and how we, if we exclude certain groups, are able to still make significant reductions? Is that based upon First and Third World economies? Can you make some brief comments in that regard.

**Dr Roulet:** The issue you have raised is actually the major problem. You've actually hit on a number of the major problems going into Kyoto. There are certainly efforts in certain public relations sectors trying to not get the US and Canada, for example, to commit to certain reduction levels at Kyoto because it will have an economic implication on those areas of the economy.

You've also hit on the single most important issue in the Kyoto discussion: what will happen in the developed countries versus what is happening in the developing countries. If you look at the proportion of emissions that come from developed countries and the proportion of population in developed countries and then you reverse that and look at the emissions that come from developing countries, and assume that those individuals in the developing countries have every aspiration to reach the economic wellbeing that we have attained in the western countries, and you consider that the far greater percentage of the population is in developing countries and you look at the record of emissions that developed countries had while they were developing, because in fact we have now reduced our emissions in per-unit economic output quite considerably since about the 1980s, that is the major issue: What happens with the developing countries?

1650

The United States is arguing that developing countries should have the same standards applied to them as has happened in developed countries, but the developing countries are arguing that it's going to have a severe impact on their economic development. The European countries are suggesting a two-tiered type of system, with some technological transfer that could happen from developed countries to developing countries.



If I had the answer to that question, I would probably be at Kyoto answering it. You've hit the central political issue in this.

As far as the advertising campaigns are going, there is a concerted effort to try to confuse the debate, an attempt to not have any solid decisions made.

**The Chair:** Thank you very much, Dr Roulet. We appreciate your appearing before the select committee today and the presentation of your evidence. I also appreciate your agreement to provide some of the information to us in writing. That will be of assistance to our legislative research. It has been the only sidebar of evidence provided. That's very important to us in this very tight focus, and so we appreciate your presentation. I hope we can get to you for further information if it should be necessary as we complete our studies.

We thank you so very much for being with the select committee. You're excused.

#### MINISTRY OF THE ENVIRONMENT

**The Chair:** Members of the committee, we are prepared to welcome members of the Ministry of the Environment to the witness table, if they are now ready for presentation. I have no idea who all is at the witness table right now, but for the purposes of Hansard if we could begin with each identifying themselves and their position and so forth, we'll then be in the hands of the witnesses to make their presentations. At the conclusion of the presentation, we will then go into questioning in sequence by caucus, so if we could begin.

**Ms Ivy Wile:** Good afternoon. My name is Ivy Wile. I'm acting assistant deputy minister of the science and standards division of the Ministry of the Environment.

**Mr Chuck Pautler:** My name is Chuck Pautler. I'm the acting director of the program development branch, Ministry of the Environment.

**Mr Doug Harper:** Doug Harper, manager, biomonitoring section, Ministry of the Environment.

**Mr Bob Shaw:** I'm Bob Shaw. I'm the assistant director of central region of the Ministry of the Environment.

**The Chair:** Thank you. We are in your hands if you'd be prepared to make opening comments.

**Ms Wile:** Thank you, members of the committee, for allowing us this opportunity to meet with you and present our information. In addition to the people who are sitting at the table with me, there are a number of staff experts in the background. We might call upon them to answer some of the questions. They'll introduce themselves at that time.

Our job at the ministry is to ensure that effective environmental laws, regulations and standards are established and enforced across the province. The minister has stressed on a number of occasions his expectation that Hydro will continue to meet these environmental requirements.

The ministry has had an opportunity to review the preliminary information provided by Ontario Hydro dealing with the potential environmental effects of the nuclear

asset optimization plan. We look forward to reviewing the specific details of Hydro's plans as they come forward to ensure all environmental controls are in place and environmental protection is maintained.

To hopefully assist the committee in its deliberations, I'd like to start today by providing an overview of our regulatory framework and the protection measures that are available under the various pieces of legislation. We'd then like to move on to specifically those rules that apply to Ontario Hydro and finally end up with a brief assessment, a very preliminary assessment, of the implications of any emission increases. This is hopefully going to provide a context for explaining how the ministry interacts with Hydro to ensure that emissions and discharges do not exceed our regulatory limits.

With regard to our regulatory framework, Ontario Hydro is subject to the same regulatory requirements as every other industry in the province. The primary regulatory environmental legislation includes the Environmental Protection Act, the Ontario Water Resources Act and the Environmental Assessment Act.

The Environmental Protection Act imposes requirements to obtain approval for emissions to the atmosphere and for the establishment and operation of waste disposal sites. The Ontario Water Resources Act imposes similar requirements for treatment and discharge of sewage and other effluents.

Under these pieces of legislation, the ministry controls emissions to the natural environment through certificates of approval. Environmental quality standards form the basis for issuing or granting these approvals. The ministry has approximately 900 standards for the various media and approximately 350 of these are for air. Any changes to the limits imposed by a certificate of approval require ministry review and the issuance of a new approval.

In 1996, the ministry posted an aggressive three-year plan for updating and developing new environmental standards. With a major focus on air, the plan identifies more than 70 air standards for development. To date, we've tabled 14 proposed air standards with stakeholders for preliminary discussion, and many of the specific contaminants are relevant to fossil-fuelled generating stations. We have an additional 19 standards under development.

In addition to the above, both the Ontario Water Resources Act and the Environmental Protection Act provide a director in the ministry with authority to issue orders to companies to take corrective action in case of non-compliance or where a serious environmental problem has been identified. These orders are legally binding.

Any company or person, including Ontario Hydro, can be prosecuted for failure to comply with either the general provisions of our environmental legislation or with specific requirements imposed on them by means of regulations, certificates of approval or director's orders.

For any increase to emissions to the environment over and above existing allowable limits, the company or person must first seek approval from the ministry.

Referring now to Ontario Hydro's specific requirements, some of the previous presentations to your com-

mittee had raised concerns regarding possible increases in emissions of certain toxics, such as arsenic, cadmium, chromium and lead. We'd like to point out that the ministry has regulatory standards for all of these substances, which Ontario Hydro is required to meet.

The air standard for lead was reassessed in 1994 and is one of the most stringent in the world. Under the three-year plan, as I mentioned earlier, the ministry has proposed new standards for cadmium, arsenic and chromium. These proposed standards are under discussion with stakeholders.

Concerns have also been raised by previous presenters about the potential increase in particulate matter. The current regulatory standard of 100 milligrams per metre cubed is based on total suspended particulate; that includes larger as well as smaller particulates. The ministry recently announced an interim ambient air standard for PM<sub>10</sub>, smaller particulates of 50 micrograms per metre cubed for a 24-hour average, in recognition of the serious health effects that these microparticulates can cause.

1700

The interim air quality criterion for the PM<sub>10</sub> will be considered when we are reviewing Ontario Hydro's applications for certificates of approval to expand generating capacity at individual stations.

The ministry also has an air standard for mercury, which Hydro currently meets. Nevertheless, the ministry is concerned about the impact of mercury, since it's a globally recognized priority pollutant. The development of Canada-wide standards for mercury has been identified as a priority by the Canadian Council of Ministers of the Environment under the effort to harmonize activities between federal and provincial governments.

The ministry has also committed to developing an action plan for mercury in our 1997-98 business plan. Under the plan, the ministry intends to work with all mercury sources in the province, including Ontario Hydro, to develop strategies to reduce mercury emissions.

The ministry's acid rain regulations, Ontario regulation 355/90, prescribe an overall emissions cap for Ontario Hydro whereby the total annual sulphur dioxide emissions cannot exceed 175,000 tonnes and total annual sulphur dioxide and nitric oxide emissions cannot exceed 215,000 tonnes. The overall provincial cap of 885,000 tonnes for sulphur dioxide was set to achieve a 60% reduction in sulphur dioxide emissions in Ontario from the four largest emitters, one of which is Ontario Hydro, and other smaller sources.

Under this requirement, Ontario Hydro must report on their emissions quarterly to the ministry and maintain continuous emissions monitoring systems for both sulphur dioxide and NO<sub>x</sub> at all fossil-fuelled generating stations. The regulation also requires an annual review of monitoring systems or audit conducted by an external auditor and report submitted to the ministry.

Under the clean water regulations, or MISA, these regulations define effluent and toxicity limits for nine industrial sectors, including electric power generation. The electric power generation regulation became law on April

13, 1995. It applies to 12 generating stations and associated facilities. The regulations set limits for conventional pollutants such as solids, oil and grease and, in the case of electric power generation, for heavy metals such as zinc and aluminum. Under MISA, industries, including Ontario Hydro, are required to monitor and report on their effluent quality.

Under the Environmental Assessment Act, the establishment of new Ontario Hydro facilities requires review and approval before proceeding. The operation of existing Ontario Hydro nuclear and fossil-fired generating stations is covered by provincial exemptions. These exemptions were generally granted because at the time of the act's proclamation in 1976 these facilities were either constructed or well advanced in the planning. Any changes in the operations, such as laying up and restarting, would be covered by these existing exemptions.

Nuclear facilities are currently regulated by the federal Atomic Energy Control Board. Any requirement for permits or licences from the Atomic Energy Control Board would trigger the Canadian Environmental Assessment Act at the federal level. If the Canadian Environmental Assessment Act were triggered, there would be opportunities for Ontario to participate in any federal review. Private undertakings are not subject to the Environmental Assessment Act unless designated by the minister and cabinet.

With regard to voluntary commitments in our battle with smog, Ontario Hydro made a number of commitments. In 1991, they made a voluntary commitment to limit their nitric oxide emissions to 38 kilotonnes per year, beginning in the year 2000. NO<sub>x</sub> is a smog precursor. I should also mention that over 50% of Ontario's smog problem does originate in the United States.

Hydro's latest NO<sub>x</sub> emission projections are for 45 kilotonnes in 1998, 44 kilotonnes in 1999 and 41 kilotonnes in 2000, with the emissions below the cap in 2001.

With respect to greenhouse gas emissions, Ontario Hydro has made a commitment at the national level to stabilize emissions at 1990 levels by the year 2000. A further reduction of 10% below 1990 levels will be achieved by 2005.

Although Ontario Hydro has not committed to any further nitric oxide reductions beyond the year 2000, the ministry expects Ontario Hydro to commit to further reductions in order to meet the NO<sub>x</sub> reduction targets under our smog plan. Any new power-generating sources will have to meet stringent requirements.

Currently, Ontario Hydro emissions are below their voluntary commitment of 38 kilotonnes of nitric oxide. The increase in fossil fuel use will increase the emissions of nitric oxide by 10 kilotonnes over the years 1998-99.

To put some context around these issues, we have done a preliminary analysis. By way of introduction, Ontario launched the Countdown Acid Rain program in 1985 to reduce, as I mentioned earlier, SO<sub>2</sub> emissions by 60%, based on 1980 base levels, by 1994. Concurrently, the US commitment is for a 40% reduction from 1990 levels by the year 2010. Ontario's 1996 emissions represent an



actual 70% reduction from the 1980 base, or 10% over our actual established limits. In 1996, Ontario Hydro accounted for 12.7% of Ontario's SO<sub>2</sub> emissions or 85 kilotonnes.

While still meeting their regulated limits, Ontario's projected SO<sub>2</sub> emissions will be 170 kilotonnes in 1998, 171 kilotonnes in 1999 and 174 kilotonnes in 2000. This increase in sulphur dioxide emissions will potentially increase deposition of sulphate by 0.5% to 1% in central Ontario, places such as Muskoka.

Ontario as a whole is responsible for about 30% of Canada's total greenhouse gas emissions. Ontario Hydro accounted for 12% of those emissions in 1995, or 3.6% of total Canadian emissions.

Ontario's total greenhouse emissions in 2000 were predicted in the 1997 federal forecast to be 5% below 1990 levels. The same forecast predicted Canadian emissions will be about 8% over 1990 levels in the year 2000. However, this forecast had unrealistically low projections of electrical growth in Ontario and requirements for fossil fuel generation.

As part of a national effort on climate change, the ministry has indicated to Ontario Hydro that we expect it to meet its voluntary commitments to stabilize emissions at 1990 levels by the year 2000 and reduce them to 10% below 1990 levels by the year 2005.

With regard to NO<sub>x</sub>, Hydro's voluntary commitment will likely be exceeded by three to four kilotonnes in 2000 but should be met in the year 2001.

**Mr Conway:** Just a moment. The witness seems to be reading from a text, and there's good data presentation there. If possible, sharing that text with the committee is going to make some of the questioning a lot easier. I'm quite impressed by the data that's being cited. I notice a number of the presenters have copies of the text. Just as a matter of comfort.

1710

**The Chair:** I think that's a reasonable request. If there is a document you might share with us, I can have the clerk run it off for all members, to facilitate questioning.

**Ms Wile:** I must apologize, though; some of it is slightly scribbled out. It was prepared in a very short time frame.

**Mr Conway:** That's fine. I understand. It's the data.

**The Chair:** That's fine. Please carry on. It's an exhaustive and detailed presentation. We'll make sure we get a copy of it as soon as we can after your presentation. Please continue.

**Ms Wile:** Our best estimate in terms of mercury is that over 70% of the airborne mercury in Ontario comes from transboundary sources. That's just to put Hydro's in perspective. Our own releases, Ontario's releases, of mercury to air are estimated to be from 2.5 to 4 tonnes per year, and current emissions from Ontario Hydro are estimated at about 400 kilograms per year, or approximately 16% of the total.

In closing, the government's recently released white paper on electricity restructuring proposes that a move to a competitive electricity marketplace in the year 2000 would

offer access to suppliers using more efficient and environmentally friendly generation technology. When the time comes, the ministry will look at all the environmental initiatives and make sure they're flexible enough to enhance competition and at the same time protect the environment.

**The Chair:** Thank you very much. On behalf of the committee, we appreciate the presentation. We did in fact accelerate the timing of presentation here before the committee, and I know it wasn't easy for you to get it prepared in time. The committee appreciates the effort you've made to be ready to make the presentation. I'll look forward to receiving the written documentation. We'll begin some questioning, if we can, for a while. Let me begin with the government caucus.

**Mr Galt:** Thank you for the presentation. The sheet I have here is from Ontario Hydro, and their forecast emissions were the same as you gave us a little earlier. As I look at this and go across, I see the regulatory limit, 215, and I see 215 coming across here in the total of SO<sub>2</sub> and NO<sub>x</sub>, sitting right on the line. My concern is, what happens when they go over? They're not giving us any margin, even 1%; they're right to the line. What is going to happen when they go over, and how closely will they be monitored?

**Ms Wile:** Because the 215 is a regulatory limit, if they exceed that limit we can prosecute or enter into compliance discussions to make sure they meet the limit. But that is a regulatory limit, and we are entitled to proceed with prosecutorial action.

**Mr Galt:** I'm sure this committee would be interested in knowing what that penalty would be. Would it be a little slap on the wrist or would it be quite significant? Would they lock up the president? What kind of nasties would we do to them?

**Mr Conway:** Put Farlinger in a cage.

*Interjections.*

**Mr Galt:** The question is, what are the penalties? I'm being quite serious.

**Mr Shaw:** The corporate penalty is \$50,000 on a first offence. That's the maximum penalty on a first offence with the type of material we are talking about.

**Mr Galt:** Minimum?

**Mr Shaw:** That's the maximum.

**Mr Galt:** And the minimum?

**Mr Shaw:** There is no minimum.

**Mr Galt:** There is no minimum. It needs upgrading, doesn't it, as we're thinking down the road? There's a proposal for emissions trading. I was questioning our previous delegate earlier on this particular one. What are the feelings of the ministry about emissions trading? Yes, we do ratchet it down, but it kind of has a nasty sound to it on the surface. Tell us your feelings about emissions trading. Is this good, bad or indifferent?

**Mr Harper:** When Ontario Hydro made their proposal in 1991 to cap their NO<sub>x</sub> emissions by the year 2000 at 38 kilotonnes, in the letter to Minister Grier they outlined a number of ways they wanted to get there, a number of tools, many of them fairly standard: low-NO<sub>x</sub> burners etc.

They did point out, however, in the letter that one of the things they wanted to explore were, as they called them at the time, economic instruments, but by definition or by implication that meant emissions trading at that time.

For the last couple of years, Ontario Hydro and a group of companies have been operating a pilot project, with the ministry sitting at the table observing the goings-on and the outcomes. This pilot project is called the pilot emission reduction trading program and it's basically just what it says: It's a pilot program to look at emissions trading, to look at the feasibility within the Ontario regulatory context. Does it have a future within that context, and if so, what sort of rules should be written?

When that group has finished their work, they are expected to make, and they have mandated themselves to make, some recommendations to the government which are for the government to take under advisement and use as you see fit.

**Ms Wile:** I just add that any emissions trading efforts that are in place now would not apply to regulatory limits; they apply to the voluntary commitments that have been made.

**Mr Harper:** Solely to the 38-kilotonne voluntary NO<sub>x</sub> limit.

**Mr Galt:** To that aspect.

**Mr Harper:** That was their proposal at the time.

**Mr Galt:** The other area that we need clarification on is that we've had, as you're probably aware, a vote out in Pickering on an environmental assessment for starting the reactors up a second time. How does the Environmental Assessment Act apply to that? Is this necessary? Is this something that's a good idea or whatever?

**Mr Pautler:** The changes in the operations, such as the laying up or the restarting of a facility such as the Pickering facility, would currently be covered by the existing exemption orders that were prepared in the mid-1970s. So a new environmental assessment would not be required per se under the provincial legislation.

**Mr Galt:** You're saying there was no environmental assessment carried out in 1977.

**Mr Pautler:** Pickering was built at the time.

**Mr Galt:** So it was exempt. It was already there.

**Mr Pautler:** It's operation and maintenance and those kinds of activities were covered by that exemption order.

**Mr Galt:** What about Bruce? Did it go through an EA at that time?

**Mr Pautler:** No, it was built as well at the time.

**Mr Galt:** It was in place at that time.

**Mr Pautler:** That's right. The only facility that was not built that was exempted at that time was Darlington.

**Mr Galt:** And it received an exemption?

**Mr Pautler:** It received an exemption order and it proceeded to be constructed pursuant to the numerous terms and conditions that were attached to that exemption order.

**Mr Galt:** Did this get changed regularly each time they hesitated in the construction?

**Mr Pautler:** No.

**Mr Galt:** Was that part of the cost problem there or was it just a constant exemption?

**Mr Pautler:** There was one exemption, I believe, for Darlington itself and it didn't hold up the project at all per se.

**Mr Galt:** So the regulatory changes they talk about were more from the AECB, I expect.

**Mr Pautler:** Yes.

**Mr Kwinter:** I just want to follow up on what Dr Galt was asking you. As you know, there was a question on the ballot for the people in Pickering calling for application of the Environmental Assessment Act before any of the laid-up reactors are brought back in. You say they don't require that. How would they go about doing that if that was something they wanted to have done?

**Mr Pautler:** First of all, the question of the reactors being restarted is really covered by the rules and regulations of the Atomic Energy Control Board. Ontario Hydro would have to follow those requirements and the rules and procedures that are laid out by the board in restarting a reactor. The Ontario Environmental Assessment Act, due to constitutional reasons, does not apply to the restarting of the reactor itself.

At this point in time, we would expect no other changes to the facility: the buildings, the transformer stations, the egress from the site, the effluents to discharges etc. So there are no other changes at this point that we're aware of to the facility that would require environmental assessment approval or EPA approval. Now, if there were changes to effluent, Ontario Hydro would have to certainly comply with the clean water regulations or the MISA regulations which prescribe a limit to what they can discharge to Lake Ontario.

**Mr Kwinter:** Effectively what you're saying is that, notwithstanding that there was overwhelming support for that, there is no provision or no need for it because it's either covered by the existing facility or it falls under the Atomic Energy Control Board's jurisdiction.

**Mr Pautler:** Under the current legislation and regulations, with the way they're written, that's correct, sir.

1720

**Mr Kwinter:** I just want to get your reaction. You were saying that, with the white paper, there will be more efficient energy sources available and that should cut down on the emissions. We had Dr Roulet saying to us just before you appeared that if there was a hierarchy of emissions, he would say nuclear was the cleanest, hydro was second, oil was third and coal is the worst. In any kind of replacement energy, nuclear would not be an option, I don't think. There might be some, but certainly the whole issue that we're trying to address is that the nuclear capability is going to be reduced, either permanently or over a short time or medium-term, and it's going to be replaced with other energy sources.

It would seem to me that no matter what happened, those emissions would go up, as opposed to what I understood you to say, that it might be more efficient because the market is opening up. The market is opening up, but from what we've heard, it will primarily be gas, and we've already heard that gas has greater emissions than nuclear. Do you have a response to that?



**Mr Pautler:** In response to the question, Mr Kwinter, we believe that in the competitive marketplace for electrical power generation, the market would respond with more environmentally friendly fuels, if there were some, on the fossil side. For example, the gas-fired stations would probably come forward as opposed to coal-fired stations, and gas, in the large scheme of things, in comparison to coal, would be the more environmentally friendly option.

**Mr Kwinter:** The point I'm trying to get confirmation on is, once you eliminate nuclear, you may get a far more environmentally friendly decision on the three remaining, but regardless of which of those three you take, it will still not be as environmentally friendly as the nuclear. Is that a fair assumption?

**Mr Pautler:** In general, we'd say yes to that.

**Mr Harper:** You're quite right. The emissions must go up, and indeed Hydro acknowledges that in these numbers that Dr Galt referenced, where you see 40s instead of in the 30s. Those numbers indeed will go up in the short term unless that nuclear comes on in a timely fashion. Essentially their numbers support what you're saying.

**Ms Marilyn Churley (Riverdale):** Thank you very much for coming today. I'm sorry, I came in late to relieve my friend Mr Laughren who had to fly back home.

I was just taking a quick look through your presentation and caught up a little bit. This table of numbers — as I understand it, there is no regulatory limit for  $\text{NO}_x$ . It's a voluntary number, the 38. Right? So according to this chart, you will meet the regulatory limit on  $\text{SO}_2$  — you're a bit below it, whoever is answering this;  $\text{NO}_x$ , you will be somewhat over the voluntary commitment, and acid rain,  $\text{SO}_2$ , is going to be right on the money according to this. My question would be, was all this analysis done internally by Hydro or were there independent analyses done as well?

**Mr Harper:** We believe it's entirely Hydro's. They've shared previous iterations of this with us, but we believe it's entirely Hydro.

**Ms Churley:** How believable are these numbers? I must say they fairly well meet targets, except for the one that's somewhat above the voluntary commitment. Given the fossil fuel plants you have to fire up again, especially if they were done internally, how believable do you think they are? Are you confident that these numbers can be reached? I suppose attached to that is, is this a worst-case /best-case scenario?

**Mr Harper:** I think your last sentence is really —

**Ms Churley:** You like that better than "How believable are these numbers?"

**Mr Harper:** As you can understand, they could put any number on the paper here, and any number is subject to the weather. If you have a particularly hot summer and air-conditioning demand, or a particularly cold winter and heating demand, it can throw these numbers out. I don't know whether they are offering us mean or max. I suspect they're offering us something in the middle. If they got particularly lucky, I suspect they could come in under those numbers. I might look to Walter.

**Ms Churley:** Is there somebody here who actually knows a little? Mr Chair, could I beg your indulgence?

Perhaps if there is someone here who is a bit more knowledgeable about it, that would be helpful.

**The Vice-Chair (Mr Monte Kwinter):** Could you change so we can get this recorded on Hansard and just identify yourself, please.

**Dr Walter Chan:** My name is Walter Chan and I am the acting assistant director with the standards development branch of the Ministry of the Environment. The numbers projected by Hydro are based on the projected median load growth.

**Ms Churley:** Median low growth?

**Dr Chan:** Median load. It could be higher or it could be lower, but this is the best estimate they have.

**Ms Churley:** How long were these numbers being worked on? When did you start gathering this information and doing the analysis?

**Dr Chan:** We saw some numbers after they announced the plan initially. The numbers have been slightly modified, but they were very, very similar.

**Ms Churley:** In other words, this can be taken, to the best of your knowledge, as a sort of average? They could go up, they could go down, depending on weather and various other components. They're not totally reliable but we can take them as an average.

**Dr Chan:** They're projecting the median situation.

**Ms Churley:** How concerned are you in that case about the  $\text{NO}_x$  in particular, where even the median here is somewhat above the voluntary, particularly given the climate today in this area, if I may make a pun here?

**Dr Chan:** I think it would carry the same certainty as the  $\text{SO}_2$  numbers. They are based on what they project in terms of the technology they would use or demand management processes to project those numbers.

**Ms Churley:** I personally think it would be useful, frankly, to also have some independent analysis done, along with Hydro. Given the issues we're facing today around climate change — acid rain, for instance, is very worrisome, in that, as we know now, although the targets were met during the acid rain agreement, the terms were met, the levels were met, it didn't work for other reasons. There's going to be pressure on governments, quite rightly, to start a program again and lower those numbers.

**Dr Chan:** There is a ministry control order on Hydro which requires them to report to us audited emissions so we'll be able to follow through to see whether they are on track or not.

**Ms Churley:** What's the plan if they are not?

**Dr Chan:** It goes back to the earlier comment that they are governed by what is required by the Environmental Protection Act. There are penalties that could be imposed on Hydro.

**The Vice-Chair:** Thank you, Mr Chan. Ms Wile, I assume you want to reseat yourself. Mr O'Toole.

1730

**Mr O'Toole:** Thank you very much, Mr Chair. I'm glad you're still in the chair. You may not have been as easily recognized.

Thank you very much for your presentation. There has been extensive questioning, but Ms Churley should know that we did have some significant discussions about who

should be attesting to these numbers. Ms Churley has been rigorously and, I might suggest, rather forcefully questioning these numbers. We had suggested that we should have Ontario Hydro, Mr McNeil, here to say, "Work these numbers." It's unfortunate that Mr Laughren wasn't here, because in our first position, Mr Galt argued that we're talking to the wrong ones.

I'm reassured, though, that you have said, if I understood your presentation — thank you for the copy. I guess I have a question: Who monitors? Who actually does the physical smokestack or whatever is going on here? Who is the person with the stopwatch?

**Mr Harper:** The actual in-stack monitoring, the so-called continuous emission monitors that are used for the NO<sub>x</sub>, for instance, are operated by Hydro.

**Mr O'Toole:** And you check them once in a while to see if they're working or whatever.

**Mr Harper:** They are audited.

**Mr O'Toole:** They're audited by you.

**Mr Harper:** By a third party.

**Mr O'Toole:** Oh, you have a contract that does that for you.

**Mr Harper:** Yes.

**Mr O'Toole:** Very good. So we have an involvement in making sure that the instruments being used are effective. There is some kind of reporting mechanism, I would think. They send you a Monday morning briefing or something.

**Mr Harper:** Which is what Dr Chan referred to.

**Mr O'Toole:** Good. Who was monitoring when they were doing the Pickering effluent, the copper and that? I live there, I'm from Durham, and that's why they don't trust anybody. Honest to God, they don't. That's why they had the referendum. I live there, and those are constituents whom I'm representing. Hello there. I'm doing my job.

They had a referendum and you have told me that it was for naught. That's what you told me this morning. I'll be answering the phone tomorrow afternoon and telling them, "Don't bother, because it's not required." There's no EA required, right?

**Mr Pautler:** That's correct.

**Mr O'Toole:** Who was monitoring when they had this copper and stuff going out into the lake, four million tonnes or whatever it was? Who had the stopwatch then? The third party did, is that it?

**Mr Shaw:** In its certificates of approval for its facilities, such as Pickering, Hydro has requirements imposed on it for various types of monitoring. The certificate of approval for Pickering does not have a monitoring requirement imposed on it for copper or zinc.

**Mr O'Toole:** That answers that question pretty clearly. Thank you very much for that forthright answer. That's important, but I guess really the thing I am in all seriousness trying to accomplish is this: When we visited the site and the community — and Mr Conway and all the members were aware that there was a high level; Mayor Arthurs appeared before the committee quite adamant, and many members of the monitoring groups — it was a case of trust that was missing really. What can we as a gov-

ernment say in this report to ensure that the shutdown, the phasing up — is there anything more we should be recommending to enhance that communication and awareness?

I hear things of stuff buried on the site. I hear all these things that are rather troublesome in what should be an open process. Is there any substance to these claims?

**Mr Shaw:** I think it is fair to say that we were somewhat troubled by some of the reports that were coming out, and as a result of those concerns, two director's orders were issued on Ontario Hydro. One of those director's orders is focused specifically on the issue of the heavy metal discharges from the cooling water streams, from the plants that still use brass condensers, as well as looking at the environmental implications of those discharges into Lake Ontario from the Pickering station.

The second order — I have been quoted as saying it before and I'll use it again — requires Hydro to come clean and tell us if there are any other skeletons in their closet that they haven't told us about yet.

**Mr O'Toole:** You've put on the record precisely what the community suspected. When I asked, facetiously of course, who had the stopwatch or the monitor or whatever it's called, I was really being rather trivial about it, but I'm actually quite serious. I want to know, and the whole community wants to know, what the processes are, what the accountability is, what the responsibilities are and what role you have ensuring that you don't find out in the Toronto Star. Do you know what I mean? That's really what we're here about. That's public safety. That's a primary task of this committee. I believe, because of the culture that has been mentioned, that needs to be firmed up and there needs to be some reporting relationship to a third party, be it you or someone else.

I want to get a little less intense here for a moment, just to ease off on a lighter note.

**The Chair:** And you have one moment.

**Mr O'Toole:** Maybe I'll just sing a song.

What I really want to get to is, in this report I believe that Hydro is acting responsibly in their recovery plan. I think that all lights are shining on them. What is your comment with respect to the efforts they are making, the fuel choices, the alternative choices? For instance, at the high-load level, they may need to burn coal. As politicians, we're all going to hear about that. Do you think their suggestion of the low-sulphur coal is the kind of action that would allow me to be assured that they are making every effort to make sure we have clean air in this province?

**Ms Wile:** I think the shift to low-sulphur coal is very critical to capping effluent emissions.

**Mr O'Toole:** Is it more expensive or less expensive?

**Ms Wile:** It tends to be more expensive.

**Mr O'Toole:** How much? Twice as much?

**Ms Wile:** We're not really certain.

**Mr O'Toole:** But it is more.

**Ms Wile:** We don't have that kind of economic analysis. I guess it depends on the particular source. I know Hydro has some of their own mining operations south of



the border. We're not clear what the costs would be to them. We depend on them for that kind of information.

**Mr O'Toole:** Thank you very much. I appreciate that.

**Mr Kwinter:** Mr Shaw, I assume you're the one I should be asking this to. Have there ever been any penalties levied against any of the nuclear facilities of Ontario Hydro?

**Mr Shaw:** I have to say I don't know.

**Ms Wile:** We can certainly undertake to check and report back, but we'd have to go back through any cases, unless our legal people here might know. No, not off the tops of their heads.

**Mr Conway:** I just assume that since none of us can remember, it's probably not likely, but we'd certainly appreciate —

**Ms Wile:** Perhaps not recently.

**Mr Conway:** I want to look at the material, Ms Wile, which is very helpful. I really do appreciate your providing it, because the data are quite clear. On page 1 of your notes you make the point that the Ministry of the Environment presumably has had an opportunity to review preliminary information provided by Ontario Hydro dealing with the potential environmental impacts of the NAOP. Can you just elaborate a little bit as to what you have seen at this point in time? What kind of preliminary data have you seen? Pretty well what the committee has seen? Have you seen anything beyond that?

**Ms Wile:** We have had a presentation from Hydro. It was quite some time ago, I believe in the summer, so maybe their plans weren't as fully completed. Since then, off and on, staff have been in contact to obtain updates on information. I think Mr Harper perhaps has the most comprehensive information. Doug, could you handle that?

**Mr Harper:** They have shared earlier iterations of this with us over time, and we have seen the numbers change, as Dr Chan pointed out; not dramatically, but they have changed. They have also shared with us some of the things they have planned to do, and I think they have probably outlined them to the committee, such as the low-NO<sub>x</sub> burners, the move at Lennox and what not. That sort of information has been shared with us more or less since the beginning of August. I would assume that was approximately the time.

**Mr Conway:** Ontario Hydro has something in excess of 12,000 megawatts of installed fossil capacity. The NAOP anticipates over the next short period of time, to one degree or another but to a significantly enhanced degree relative to the pre-1997 period, to really crank that up to help fill the short-term gap.

People like the Ontario Clean Air Alliance were in here reminding the committee that one of the really unfortunate discharges of coal-fired plants is mercury. I notice in your submission you make the point that in your 1997 Ministry of the Environment business plan you are going to develop a mercury control program. Should we be concerned? The Ontario Clean Air Alliance left me rather worried about things like mercury, the substantial increase in mercury that would be generated if their preliminary assessment of the NAOP was to be credited. I can give you the testi-

mony, but I don't want to waste valuable time. Does the Ontario Clean Air Alliance have a point? Should we be concerned about the substantial increase of mercury that might be generated as a result of increased reliance in the short term on these fossil plants?

**1740**

**Ms Wile:** In general I'd like to say that yes, we should be concerned. There's just a growing concern globally over mercury. We have to look at all sources. Any increases obviously aren't desirable. Some of them may be unavoidable. I believe some of the shifts to something like gas instead of coal would reduce or mitigate some of the mercury emissions. We're concerned enough that we have moved aggressively on looking at all the sources. We're working with our federal colleagues because mercury has become very much a national issue.

We've got some actions that have already taken place on a number of sources. A big problem for us continues to be transboundary mercury because probably somewhere in the realm of over 70% comes from across the border. Not only do we have to deal with local sources, including the Hydro increase, we have to very aggressively pursue action south of the border as we do on a number of fronts: smog, acid rain.

**Mr Conway:** Just reading from that testimony of the Clean Air Alliance, because we haven't heard a great deal on the environmental front, that's why we really appreciate — I know I do — your willingness to come here on short notice to give us this excellent testimony today. On page 7 of Mr Gibbons's testimony given here on October 20 under the category "carcinogens," "Five of the toxic substances emitted by Ontario Hydro's coal-fired generating stations, arsenic, beryllium, cadmium, chromium and lead are designated as carcinogenic by the US Occupational Safety and Health Administration." There are currently no caps on Ontario Hydro's total emissions of these carcinogenic substances. They go on to say, "Ontario Hydro's proposed nuclear" optimization plan "will increase the emissions of these carcinogens by approximately 50% to 60%."

If I were a citizen of Ontario and I read that, assuming that it's credible — these are credible people, I believe — that would really catch my attention. What response would you have, as the Ministry of the Environment, to public concern in those areas? Do we not have any caps? If we're going into much more fossil-fired electricity in the short term, and I think we are, whether of our own or stuff we buy south of the border, that apparently is going to be a byproduct.

**Ms Wile:** Let me just give a preamble and then I'll ask Mr Harper to finish off. First of all, our approach to regulating some of these substances is through standards. Standards are set on a risk base. This is common among other jurisdictions. You look at whether it's a carcinogen or not. There are different models for developing those risk-based numbers. What we have in place are standards for all those compounds. We're now in the process of updating them to make sure that information is current. There are different classifications for carcinogens. There's

a listing by EPA that identifies some of them. Some of them are possible, some of them are probable. There's a whole scale of how much certainty is associated with their carcinogenic ability.

When we set these standards and they are placed in regulation, that obliges every industry to meet those standards. That's how we regulate the discharges of these carcinogens.

**Mr Conway:** You expect to have a more detailed program around things like mercury and some of these others.

**Ms Wile:** For selected contaminants that require special action, we actually do more than perhaps just set regulatory limits, standards or incorporate these provisions into certificates of approval. We actually developed a separate plan of action for things such as smog or acid rain. Now we're moving on mercury. For other substances we continue to have our normal regulatory limits and regulatory tools in place which are updated on a regular basis to ensure that they're current with current scientific knowledge. I don't know if Mr Harper wants to add anything.

**Mr Harper:** I was going to try to add some context or maybe some scale in answer to your question. I'm going to pick on mercury because it's the one Mr Gibbons usually cites first and it's the one that most people pick out of that list. You could call it fortunate if you wish, but we are able to estimate how much mercury comes out of a stack, because the mercury comes from the coal, and that mercury is lost virtually in its entirety up the stack, very little of it left in the ash. Even if you estimate 100%, you then know you should have a very good estimate of what's actually being emitted, unlike  $\text{NO}_x$ , where it's dependent on temperature, which can go up and down. It's harder to characterize.

We have a good idea of what's coming out of the stack. We are able to mathematically model it where necessary. But in the case of the ministry, we have been able to go beyond that and have been party to the development of quite a sensitive mercury analyser which is portable. We have taken it and we have done some monitoring in the Nanticoke stack: tracked the plume and followed the plume around and done some monitoring. The levels we measure are extremely low. Even if they increase under the scenarios that are presented to us here, we are still looking at very, very low numbers.

**Ms Churley:** To follow up on that, you dispute Mr Gibbons's numbers. I know you haven't seen the report, but they were just read out.

**Mr Harper:** No, I don't dispute his numbers. In fact, he gets his numbers from Ontario Hydro and we have the same numbers from Ontario Hydro. I don't dispute the tonnage. What happens is that the concentration in air, the exposure to you or me if we were living in that region, is still very low. However, don't let me sound like I'm trivializing it. The comments Ms Wile made with respect to the focus we want to give mercury — because of its known toxic effects, we're more than willing and quite prepared to continue to seek further reductions from Hydro.

**Ms Churley:** Do you know what the allowable limits are on mercury emissions in the United States?

**Mr Harper:** No. We could get it, but offhand I can't cite it.

**Ms Churley:** I was just wondering because, as everybody is saying, it's one of the toxins that is most talked about these days. I don't know if there's some kind of zero tolerance like there is for dioxins now or what. But if you don't know, that's okay with me. I'm just wondering if people are there to protect the environment.

I suppose this might be somewhat hypothetical, and you're not necessarily paid to do this, but given that you are there to protect the environment, you have seen the option which came forward from Hydro, can you see that there might be other options available to the committee to recommend to Hydro that would have less damaging effects on the environment? I've put you on the spot a bit here, but using fossil fuel energy we all know is not a good way to go.

**Ms Wile:** There are a number of items that we would encourage them to pursue: energy conservation measures within what's feasible; we would be looking at low-sulphur coal, hopefully gas — we're probably not experts in that area; better insulation of pollution control technology, scrubbers and whatever is possible. We're not perhaps the right experts to have all the answers to those questions.

**Ms Churley:** I didn't expect so, but I'm glad you mentioned things like energy conservation and efficiency and renewable sources, cogen, all of that. In my view, this is an opportunity to really speed up. Would you agree with that?

**Ms Wile:** Yes.

**Ms Churley:** I know you're not experts, but as protectors of the environment you would recommend to the committee that it be looked at and that this be an opportunity to speed up the process and government getting involved in these programs?

**Ms Wile:** We would certainly encourage any measures that benefit the environment. We'd be happy to hear —

**Ms Churley:** Thank you. A slightly different track here, and again you can't give me any confidential information; I realize that. But the minister is going to be coming forward some time I guess in the near future with the regulatory changes. As you know, a paper was released on that some time last year. We hear that it's going to be soon. We don't know for sure, but obviously there are going to be changes to some emission guidelines. I suppose some are going to be strengthened and some weakened. But you don't think it will have any impact on what we're talking about here? As far as you know, there will be nothing within those regulatory changes.

**Ms Wile:** We don't anticipate any changes that would loosen the limits on Hydro.

1750

**Ms Churley:** What I am also getting at is that they could be toughened in some areas, which could possibly affect your plans or the numbers here and the implications.



**Mr Pautler:** I don't think there are any regulations that were contemplated in that earlier paper, Ms Churley, that would impact this particular plan, either make it more stringent or in any way lessen the degree of environmental protection.

**The Chair:** As well, just before you go, perhaps I might ask you a question concerning your relationship to the Atomic Energy Control Board; in specifics, your relationship to Ontario Hydro nuclear facilities and AECB. For example, under the Environmental Assessment Act, do you have the right to shut down a unit? Do you have a right to step in and control the operation of a facility, or do you have the responsibility to report to the AECB?

We've heard the modesty of the financial part that Dr Galt, I think, focused on. Are you able to give any other kinds of information about your regulatory authority to control under the Environmental Assessment Act?

**Mr Shaw:** If I could take the liberty of expanding that beyond the Environmental Assessment Act, and I will just use the province's environmental legislation period, the answer is that all matters relating to the operation of the nuclear facility that deal with the matter of any type of radioactive material, its usage etc are solely under the control of the AECB and none of the provincial legislation allows it to step in and shut down a nuclear reactor, as you have suggested, or anything like that.

**Mr Pautler:** If I could add to that, in our presentation we outlined that if the Canadian Environmental Assessment Act were triggered by the proposed changes contained in this plan, we have agreements with Environment Canada to participate in the decision-making processes that would be triggered under the Canadian Environmental Assessment Act where the nuclear regulatory decisions could be made. So we can participate in that way in those kinds of decisions.

**The Chair:** But other than that, you are mute.

**Mr Pautler:** That's correct.

**The Chair:** Thank you very much for making your presentation today. I again wish to express my appreciation to your minister and to you for being here on short notice and for making this presentation as detailed and as exhaustive as you have been able to do. Thank you very much for your presentation and attending upon the committee. You are excused.

May I remind members of the committee who had circulated to your desk in the House the committee meeting notice for next week. I will just remind you that on Monday we are meeting at 3:30 pm, or 1530 if you choose metric. We will hear from Ms Clitheroe and then we will hear from Mr Farlinger. At 7 pm the meeting is likely to be closed as we begin the report writing. That will depend on how the afternoon unfolds. But clearly I'm conscious of the time frame the committee is running.

We will proceed then into Tuesday at 3:30, closed, to continue report writing.

Wednesday, 3:30, closed session to continue the report writing.

Thursday morning, I will remind you if you have your document, there was a slight error there, as Mr O'Toole has graciously invited us and reminded us, and we would

not hesitate to accept that invitation and it would be inappropriate not to accept it. We will in fact be adjourning to Darlington in the morning.

In the afternoon we will meet in closed session to bring the report writing hopefully to a close, or very shortly to a close, and that will bring the week to an end.

**Mr Kwinter:** Mr Chairman, you have alleviated my concerns because I got the notice in the House and I noticed that Darlington had not been included. You have now corrected it. That was what I was going to raise.

**The Chair:** Then, sir, I am doing my duty and you, as a diligent vice-chairman, have kept me on track and I appreciate that.

*Interjection.*

**The Chair:** That's what happens with wealthy men. They let no small matter escape their attention, so I appreciate that. Thank you. Any other business?

**Mr Kwinter:** I leave no turn unstoned.

**Mr Galt:** I wasn't in the House and I didn't get a yellow copy. I just heard you say it was in closed session at 7. Somebody of the three delegations must be missing.

**The Chair:** The consortium, Dr Galt, was not able to be here on Monday and we have asked the consortium to provide us written documentation.

That now allows us to truncate the witness — we complete witnesses on Monday and then this committee will go into its report writing.

**Mr Conway:** Before we take our leave, I really appreciate the speed with which Mr Gourley has supplied us with a copy of his October 28 letter. But I've got to tell you — am I the only one? — I read this letter, and I certainly am very appreciative of getting it, but the letter conveys a different tone than I got earlier from today's —

**Mr O'Toole:** It's a very firm memo.

**Mr Conway:** It's a much appreciated letter. Am I the only one who reads it that way?

**The Chair:** I have a sense that we will be returning to that next week as we consider our report. Is there any other business before the committee?

**Mr Galt:** Yes. A nice young man met me, when I left at noon, about working out a market in connection with rating agencies. Apparently Dominion Bond Rating Service has worked out a scenario for various nuclear plants. I'm wondering if we could obtain that from the agency. He was going to phone me this afternoon. I did not get a phone call —

**The Chair:** We'll make an inquiry. I'll ask the staff if they'll pursue that over the next —

**Mr Galt:** If we could get that from the rating agency, it would be very helpful.

**The Chair:** I'll ask the staff if they'll try to find that for us. Lewis, if you could at least investigate and ask —

**Mr Galt:** The Dominion bond company.

**The Chair:** I heard you, Dominion bond. We'll follow it up, Dr Galt.

Any other business before the committee? If not, the committee will stand adjourned until 3:30 pm imperial or 1530 metric on Monday, November 24.

*The committee adjourned at 1758.*





## CONTENTS

Thursday 20 November 1997

Ministry of Finance.....	H-589
Mr Mike Gourley	
Mr Steve Dorey	
Mr Tony Salerno	
Dr Nigel Roulet.....	H-604
Ministry of the Environment.....	H-612
Ms Ivy Wile	
Mr Chuck Pautler	
Mr Doug Harper	
Mr Bob Shaw	
Dr Walter Chan	

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H-21

H-21

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First Session, 36<sup>th</sup> Parliament

**Assemblée législative  
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Première session, 36<sup>e</sup> législature

**Official Report  
of Debates  
(Hansard)**

Monday 24 November 1997

**Journal  
des débats  
(Hansard)**

Lundi 24 novembre 1997

**Select committee on  
Ontario Hydro nuclear affairs**

**Comité spécial des affaires  
nucléaires d'Ontario Hydro**



Chair: Derwyn Shea  
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## LEGISLATIVE ASSEMBLY OF ONTARIO

## ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

SELECT COMMITTEE ON  
ONTARIO HYDRO NUCLEAR AFFAIRSCOMITÉ SPÉCIAL DES AFFAIRES  
NUCLÉAIRES D'ONTARIO HYDRO

Monday 24 November 1997

Lundi 24 novembre 1997

*The committee met at 1537 in room 151.*

## ONTARIO HYDRO

**The Chair (Mr Derwyn Shea):** The select committee on Ontario Hydro nuclear affairs will be in order and we will continue with the public testimony.

As we had agreed last week, for the first hour we welcome back to the witness table Eleanor Clitheroe and Malen Ng. We welcome you back for the questioning of the committee. It is my understanding that both in your case, Ms Clitheroe, and the chairman's case there is a wish to have a period of time for presentation and then we will go to the caucuses for the round robin questioning of about five minutes per caucus as we move around. If we exhaust the questions before the hour has been exhausted, then we'll conclude the questioning at that point and give you an opportunity to add any other comments you'd like or the Chair will continue with questioning, depending on how the day goes.

Ms Clitheroe, we're in your hands. For the purpose of Hansard, if you would be good enough to identify yourself and your colleague at the witness table with you, and then we'll proceed.

**Ms Eleanor Clitheroe:** My name is Eleanor Clitheroe. I'm chief financial officer at Ontario Hydro. My colleague is Malen Ng and she is vice-president of corporate finance at Ontario Hydro.

Thank you for giving me the opportunity to make a few opening remarks. I welcome the opportunity as clearly there's been some change in the situation at Ontario Hydro with respect to the white paper coming out and I'd welcome the opportunity to make a few remarks around the impact of the white paper on the issues that we were speaking about before. I'd also like to take a minute to briefly outline for you some of the activities that have taken place on the financial front since we met last.

Clearly, the NAOP puts severe financial pressures on the company at the very time we're experiencing fundamental change in our industry, and we're all concerned about that. There are continued regulatory pressures on the company as well with respect to safety and reliability, first and foremost. If the nuclear recovery could get done for less, we would all be much happier and, to that end, the key financial role is to keep the pressure on through diligent monitoring of costs and results in an ongoing review of alternatives for reviewing costs within the plan.

There are two areas I want to discuss. One is the business planning process that is the main focus of that effort, and the white paper issues.

I might just make a comment; also there is a third quarter financial report that should be out later in the week. I wanted to raise it to your attention because you may wish to have a copy of it when it comes out later this week.

With respect to the business planning, the company is in progress of developing and needs a fully integrated, bottom-up analysis of the NAOP. The Ernst and Young report pointed out particular areas where Ontario Hydro needs to improve either the depth of the analysis, its consistency across the company or both and those areas are being addressed now in the business planning process.

The business units have been instructed to identify the implications of the white paper for their businesses, both from strategic and financial perspectives. December and January will be the key period for this process as the senior managers review those plans and work to integrate the results, make trade-offs and choices for the company.

Meanwhile, there are some key implications of the white paper that we are dealing with, and that's what I'd like to comment on next.

Now that the government has set out a timetable and a plan for Ontario's move to a competitive marketplace for electricity, providing a specific focus for several issues including how the NAOP stacks up from the market perspective and how we deal with the financial implications and, in particular, the issue of rates.

Starting with the first question, when NAOP came forward, we reviewed the costs of NAOP, and NAOP then assumed existing structure of the industry, including the monopoly and the obligation to serve. We also had assessed the potential impact on stranding and presented those results to the board as well. The latter analysis was consistent with competition in the year 2000.

Looking at Ontario Hydro's cash flows for nuclear on a going-forward basis and using the nuclear team's costs and performance expectations, the additional investments make sense. The risk of course is that costs escalate and then anticipated performance improvements are not achieved. As you know, this has been our experience in earlier nuclear programs over the years.

But we haven't before had the operational focus that the nuclear performance advisory group is now providing. If they are successful, then using the Pickering analysis as an example, the going-forward cost is estimated at 2.6



cents and Ontario Hydro doesn't see a sustained market price below that level.

Looking at it from another perspective, the 2.6-cent figure compares favourably with a new entrant cost for efficient gas generation of 4.3 cents. So if the cost and performance objectives are met, nuclear units will be competitive.

The second question, how best to address the financial implications of NAOP, does have a different character since the release of the white paper. Before the paper came out, the choices available to the board were to add the costs to rates or to exclude them from rates but proceed to finance the effort out of existing revenue, because to do so was prudent from a safety, reliability and asset preservation viewpoint.

With the rate freeze policy in place, the former was and is a difficult option. Without the white paper to settle some of the difficult choices around restructuring, the existing obligations set the parameters for what the choices for the board were, but with the release of the white paper there is now reasonable certainty about the direction of industry restructuring. We know that the monopoly is disappearing and it will disappear the obligation to serve and the guarantee on the new debt.

As a result, given the rate freeze policy, Ontario Hydro is working with the government to put appropriate financial assurances in place to deal with this issue. This involves ensuring that each of the successor companies mentioned in the white paper is put on an appropriate commercial footing and that the monopoly and the debt guarantee stay in place until that is accomplished and that OH will be sustained in its ability to meet its obligations. From a management and board perspective, it's necessary to the principles of good governance while holding down rates and addressing financial issues as the government moves forward with the restructuring.

Ontario Hydro and the Ministry of Finance share the concerns that Mr Gourley had outlined to me in the letter that he sent me and they are working to ensure that the level of expenditures for NAOP and other programs is prudent and necessary, particularly during the transition period before the obligation to serve disappears.

Ontario Hydro has responded to Mr Gourley's letter of October 28, outlining our approach to the issues raised, and we continue to meet with the Ministry of Finance to determine the most appropriate way of proceeding under the circumstances.

Cheaper NAOP alternatives would be welcome, provided they meet safety and reliability requirements. Within the limits of what is safe and technically feasible, we will be continuing to look for opportunities to mitigate the financial impacts and to ensure that the highest level of prudence and review is exercised as we go forward in implementing this plan.

That concludes my remarks, Mr Chair.

**The Chair:** Thank you, Ms Clitheroe. We will begin the questioning with the government caucus.

**Mrs Helen Johns (Huron):** Good afternoon, Ms Clitheroe. Thank you for being here today. Where I thought I would go with my questioning you've somewhat

answered for me, so let me just ask you this question to start with. The NAOP plan was the plan developed when we had a monopolistic Ontario Hydro, and I think you said that the plan you think is the right plan, now that we have a competitive model, is the NAOP plan. Can you reconcile how we've moved from such a monopolistic to competitive market and yet the solution is still the same solution?

**Ms Clitheroe:** You're correct in saying that when we developed the NAOP model, it was done with the obligation to serve and the monopoly in place. That changes in the year 2000. However, for today we still have to deliver the power under the obligation to serve. There are some changes, however, that result from the introduction of the white paper, and that is the way one would assess the investment with respect to any power or any decisions that are taken to provide power beyond the year 2000.

We would expect that other generators would be coming into the marketplace, so the plan with respect to now and the year 2000 to provide power, to serve is still in effect. Post then, we only need to consider the economic viability of providing that power, and that will cause the board to have some reconsiderations of some parts of the plan.

**Mrs Johns:** I just want to go back to one of your questions and then I'll try and formulate a question in my mind. You told us that the price of power, if we were to redo Pickering, would be somewhere around 2.3 or 2.6 cents; I can't remember which one of those numbers. Of course, that doesn't take into consideration any of the debt that's outstanding that will be associated with hydro generation.

As you and I both know, having stronger financial backgrounds, we really are comparing apples to oranges when we consider the price of Pickering with just that extra cost, if you will, added to it versus the whole cost of a gas-fired generation, cogeneration plant. That must be a very big concern to you, what the cost of the generation is going to be, so that you can be competitive in the marketplace.

Has there been some analysis of what your all-in cost truly is? We've danced around this for the last 13 weeks here, or however long we've been sitting here. We'd like to know what the all-in cost is for Pickering, Darlington and Bruce so we can try and figure out where we are on this issue. Can you provide us with any more information than what we've got through this last number of weeks?

**Ms Clitheroe:** The all-in cost is clearly more than just the operating cost. One of the advantages of nuclear is that it has, if it's running well, cheap operating costs because of the fuel. But the flip side of that is that it has very expensive capital costs and initial upfront investment. Do you have, Malen, the actual numbers by station with you?

**Ms Malen Ng:** I have it by nuclear, fossil and hydro-electric. For example, in the 1996 annual report, if you look at nuclear, if you look at adding up all the variable costs, like OMNA and fuel and then adding in all the interest depreciation, which is a result of the debt, the unit energy cost of nuclear is about 5.5 cents.

**Mrs Johns:** Does that include capital cost too or is that just the depreciation on the capital cost?

**Ms Ng:** It's an annual cost. It's for interest and depreciation on an annual basis.

**Mrs Johns:** Amortized over 40 years?

**Ms Clitheroe:** Yes, that would be right.

**Ms Ng:** On the nuclear.

**Mrs Johns:** Okay. We would like to see your response to Gourley's letter. I don't know if you're tabling it or if you have tabled it. I haven't recognized it coming through here yet. Have you tabled that letter?

**Ms Clitheroe:** I'd have to look to some of the staff to see whether it has been tabled, but certainly we can provide the letter.

**Mrs Johns:** Okay. I just want to clarify for my own sake — obviously you now know that the province doesn't intend to guarantee the debt after 2000. One of our biggest concerns here is that you're putting this all on the table right now so that the province will guarantee it before the guarantee comes off. How much money does finance believe will have to be guaranteed by the province between now and 2000?

1550

**Ms Clitheroe:** We currently have just over \$30 billion, so we would expect that would all continue to be guaranteed. I would say some of that would come due, it would mature and have to be rolled over, so we would be thinking of that debt that would be rolled over as being guaranteed as well. At this point, we're not anticipating any incremental debt over what we have today plus those rollovers.

**Mrs Johns:** Do you still stand by the fact that Ontario Hydro will be able to make no payments on that debt, whether that be interest or — what's that called? SDR? SDR stands for?

**Ms Clitheroe:** Statutory debt retirement.

**Mrs Johns:** Does Hydro still believe they can't make any payments towards statutory debt, and is it still your opinion that the legal opinion is you don't have to?

**Ms Clitheroe:** Yes, it is the case that we do not believe we're going to be able to pay any of the debt down during that period with the plan currently on the table.

If I could make a comment about the legal opinions, what the legal opinions say is that the board, if I can paraphrase it as I understand it, has the obligation to pass all the costs into rates or to exclude costs if it is prudent to do so. Prudence could be safety, it could be all kinds of reasons. So as a basic premise, the board must meet the SDR requirements and it must pass all the costs into rates.

The only way it doesn't meet the SDR requirements — because technically it would, but in practice it doesn't, if you think about the cash flows — is if it decides to exclude some costs so that the SDR is essentially met. To exclude those costs it needs to satisfy itself that it is prudent to exclude those costs. The nature of the discussion we've been having with the Ministry of Finance since the summer is, what is the appropriate way, given the rate freeze, to go ahead and account for these costs?

**Mr Sean G. Conway (Renfrew North):** Ms Clitheroe, you mentioned at the outset of your remarks, I believe, that there will be a third-quarter financial report from Ontario Hydro later this week.

**Ms Clitheroe:** That's correct.

**Mr Conway:** Can you tell the committee specifically what those results are going to be? I'd like to do it quickly. If you've got some paper, that would be a useful thing, I think, to share with the committee members.

**Ms Clitheroe:** What I have in front of me is a summary of the report.

**Mr Conway:** Can you summarize it as quickly as possible? We've only got five minutes and I've got other questions.

**Ms Clitheroe:** The significant part, if you will, is that the outlook presents a 1997 net income projected to be \$630 million below the planned \$740 million, and that the outlook could be unfavourably affected even further by some write-offs of approximately \$475 million. That, said in summary, I think is what you would be interested in hearing.

**Mr Conway:** So the financial situation of the corporation has deteriorated somewhat.

**Ms Clitheroe:** The financial situation of the corporation continues to deteriorate because the nuclear units have not been on line and that has necessitated more expensive replacement energy costs.

**Mr Conway:** Since we last met there have been two reports, one to the committee given last week by Dr John Ahearne, the former chair of the US Nuclear Regulatory Commission. Dr Ahearne basically said to the committee that it is his experience that nuclear reactors that are laid up for anything more than a couple of years are not likely to be coming back into service. The press reports a certain W.F. Farlinger, president and CEO of Ontario Hydro, as having said, I think about a week ago, that it is a real possibility that the seven reactors that are to be laid up as part of NAOP may in fact now not be coming back into service.

Has there been any financial analysis done at Ontario Hydro corporate to assess the impact of a possible situation where none of the seven reactors that are scheduled under NAOP for laying up are in fact ever returned to service? Has there been any impact of what that kind of situation would mean to the finances of Ontario Hydro and particularly to stranded debt and stranded assets?

**Ms Clitheroe:** Yes, there has been. That information was presented to the board meeting in August. The range of numbers that were disclosed to the press was between \$5 billion and \$8 billion. The reason there was a range was because of the difference between whether the nuclear reactors did come back or did not come back.

**Mr Conway:** If none of those reactors was ever to come back into production, that would be what would drive the NAOP costs from, say, \$5 billion up to \$8 billion.

**Ms Clitheroe:** That's correct.

**Mr Conway:** So the order of magnitude of cost there is probably \$3 billion.



**Ms Clitheroe:** Probably closer to \$3.5 billion, yes, and that is primarily accounting cost write-offs of what is on the books of Ontario Hydro for those seven reactors.

**Mr Conway:** I have in front of me Mr Gourley's letter to you, Ms Clitheroe, of October 28, in which letter Mr Gourley, the Deputy Minister of Finance, says — and I'll just read from paragraph 3:

"Based on the memorandum and supporting material, it does not appear that the" Ontario Hydro "board has sufficient information with respect to the costs associated with the proposed...NAOP to determine the rate level which would enable Hydro to meet its statutory debt retirement obligations. This deficiency is exacerbated by the fact that the board has not, to our knowledge, considered alternative courses of action to the proposed plan which might produce sustainably different financial results."

This is the Deputy Minister of Finance basically saying to you, and now to the committee since the letter's been made public, that the guarantor of Hydro debt is not confident that the board, even as of October 28, had looked at in a meaningful way the range of alternatives to NAOP or in fact that the board did not, in his estimation, have sufficiently hard numbers to give finance an adequate, reasonable level of comfort.

Just so I'm clear, what would you say to the committee in response to Mr Gourley's rather direct observations in these matters?

**Ms Clitheroe:** I'd make two comments. One is that there have been a number of additional meetings with audit, finance and among management around alternative options within NAOP. I think one of those documents was tabled with you around other alternatives to nuclear power, around alternatives to a proposed rate increase and around accounting issues, around other means of funding investment in fossil or funding investments in nuclear.

**Mr Conway:** Can I stop you there. Just back up and very clearly and very slowly, if necessary, repeat what some of those alternatives are. I want to be clear that I understand what you've just said. Did I hear the words "rate increase"?

**Ms Clitheroe:** The discussion with the Ministry of Finance has been around how to manage the fact that there is a rate freeze policy and how to manage the accounting that would flow from that under the Power Corporation Act.

**Mr Conway:** I'm just trying to understand alternatives. I thought I heard you say that one of the alternatives that the board was looking at was a rate increase.

**Ms Clitheroe:** The alternatives for the board are a rate increase or to exclude the costs of the NAOP program, either year by year or all in a lump, to be able to meet the SDR requirements or beyond that. Those are the options in front of the board for their consideration as we move out for the next few months.

**Mr Conway:** Ms Ng, I have your document or the document to which you spoke quite directly on our last visit, Corporate Financial Implications and Issues of NAOP. I'm now looking again at the net income chart on

page 11 of that. I'm sure you'll remember the date, if you don't have it with you, but it's the income situation.

Ms Clitheroe has just indicated that third-quarter financials for this year are going to show that Ontario Hydro's income situation has deteriorated somewhat — I think I'm correct — deteriorated relative to projections.

**1600**

**Ms Ng:** In terms of 1997, I think Ms Clitheroe has indicated that net income will be \$633 million lower than the budgeted level.

**Mr Conway:** That's right. That's a reduction in income as against projections.

**Ms Ng:** For 1997.

**Mr Conway:** For 1997, that's correct.

I'm looking at those charts again. The charts suggest that in 1998, 1999 and 2000, according to those projections, at Ontario Hydro you'll be looking at annual negative net income of anywhere between \$300 million and \$400 million for those three years.

We now know that we're going to get competition in the year 2000 and there's going to be some kind of an interim policy between now and the year 2000. Have you done any work, Ms Ng, on trying to re-evaluate these data on the basis of the world of competition which is coming now, we know for sure, within a couple of years and which world has clearly got to be expected to put downward pressure on your revenues?

**Ms Ng:** We have done it on this basis, which is based on the current regulatory structure. Also, I think we have done some internal analysis in terms of competition. Essentially the 1996 annual report, which quotes a stranded debt estimate of \$10 billion to \$21 billion, with a reference estimate of \$16 billion, came out of the work or the modelling or the internal analysis we did by looking at the projected forward price curve that could be there when competition comes in.

**Mr Conway:** But I'm looking at the short term. I'm looking really at 1998, 1999, 2000. How are you going to fund, keep your head above water, basically, as you try to do whatever you're going to do with this nuclear recovery plan, and prepare for competition? You've got a rate freeze. How are you going to get through the next couple of years, since we now know what we didn't know two weeks ago, which is that competition's coming and it's coming soon. These numbers, as I look at them, are not good. Ms Clitheroe says that they've slipped somewhat for 1997. What can you share with the committee in terms of any analysis for the years 1997 through 1999 that you may have done on the basis of what you now know as opposed to what you knew two weeks ago?

**Ms Ng:** As I understand, the white paper states the direction for opening to retail access in the year 2000, which means that really the open competition, the starting point of that is in the year 2000, where the removal of the monopoly would take place. Essentially, in the current period before the open competition starts, what we have assumed in the numbers you've seen is there is a rate freeze, so it's assuming no increase in rates, and also what we have assumed is that during this interim period load

will remain the same. So there's no growth even if demand could go up because of the economy growing or whatever.

The position that was taken in this information is assuming that the load will not increase, the price will not increase. Also, in order to ensure that there is some prudence against any potential changes in those assumptions, we have included some contingencies at the corporate level to the tune of about \$200 million in 1998 and \$300 million each in 1999 and 2000, up to the point in terms of competition.

**Mr Wayne Lessard (Windsor-Riverside):** Maybe I can just continue from that point. I think I heard you mention, when you were talking about the third-quarter revenue, that revenue is well below planned. When you're talking about revenue, were you talking about net income or were you talking about revenue?

**Ms Clitheroe:** I was speaking about net income when I was citing those figures.

**Mr Lessard:** Part of the reason you indicated was that the costs of replacement energy were higher than — well, that was a cost that you didn't expect, I guess, that you were going to have to buy replacement energy.

**Ms Clitheroe:** That's correct.

**Mr Lessard:** Do you also expect that as a result of competition, the impact on rates would be to cause Ontario Hydro to possibly consider lowering its rates to be competitive? I'm wondering whether you see the costs of the replacement energy that you're having to buy to be significantly higher than the rates you expect in the future when competition comes. You're buying replacement energy. What are the factors that make the cost of that replacement energy higher?

**Ms Clitheroe:** The replacement energy costs are higher because the cost of running the fossil plants and essentially the purchase of coal is more expensive than the cost of operating the nuclear plants if they are running. That doesn't account for the comment that was made earlier about the fact that it's not covering the original capital costs. In terms of straight operating costs and on-going expenditures, the cost of running the fossil plant is more than that of running the nuclear plant.

**Mr Lessard:** Is any of the power being purchased from outside Ontario or is it all able to be supplied by fossil fuel generation within Ontario?

**Ms Clitheroe:** Yes, some of it is being purchased from the outside. A lot of that is being purchased from fossil plants outside Ontario. There is purchase going on from outside Ontario.

**Mr Lessard:** Would you expect the hydro that may be available when competition is opened up in the future to come from those fossil fuel plants outside of Ontario or would they be able to compete favourably with Ontario energy prices?

**Ms Clitheroe:** We would expect that there would be generators in our surrounding territories, primarily the United States, that would want to sell across our wires here in Ontario when it's opened up. The cost of that would depend on how much excess capacity there was in surrounding jurisdictions and how much they could lower

their price consequently, but we do think that there will be some of that which is quite competitive with our own fossil plants and will be competition for those fossil plants.

**Mr Lessard:** When you're talking about fossil plants, do you include coal as well as natural gas?

**Ms Clitheroe:** Yes, although we are primarily coal oriented.

**Mr Lessard:** What would be cheaper? Would it be natural gas or coal? Would you know?

**Ms Clitheroe:** Again, it would depend on the price of gas and the price of coal, obviously, but there is a school of thought that suggests that, looking forward, gas-fired plants will be a very favourable alternative.

**Mr Lessard:** You said that you had some legal opinions with respect to some repayments that you feel may not be required to be made and I was wondering whether you could give us some more specifics about what sorts of things may be excluded from those SDR requirements, and why.

**Ms Clitheroe:** Primarily, we've been considering excluding some of the costs that are associated with the NAOP, which has been the subject of the enquiry here. The reason for excluding some of those costs would be to manage the expenditures of the corporation and stay within the requirements of the act. We've had those discussions with the Ministry of Finance and we've had the discussions with Ernst and Young about what those costs would be. That hasn't been fully determined yet, exactly which costs it will be, but we do have a listing of them tentatively which we could provide if you felt it was appropriate.

**Mr Lessard:** There was a question earlier on with respect to the all-in-one costs and I guess the response was that the all-in cost isn't broken down on a plant-by-plant basis; it's only broken down according to how the power is generated. Am I right in this?

**Ms Clitheroe:** Yes. The figures that Ms Ng provided to you were on a type of generation, nuclear or fossil, as opposed to plant by plant.

**Mr Lessard:** Do you have a calculation on a plant-by-plant basis?

**Ms Clitheroe:** We do have it. I don't believe we have it here. I'll ask Ms Ng to look through her material and see if she does have it here, but we would have it back —

**Mr Lessard:** Is that something that you could provide to us at a later date?

**Ms Clitheroe:** Yes.

**Mr Lessard:** Those are my questions, Chair.

**The Chair:** Mrs Fisher.

1610

**Mrs Barbara Fisher (Bruce):** Coming back to the third-quarter report — I don't want to dwell on it too much because it's not even a released document yet, I guess, but certainly we have an indication of where things are going — how do you see Hydro making up that shortfall?

**Ms Clitheroe:** For 1997, I don't believe we will make up the shortfall. There is an expenditure freeze in place in the company; that is, all expenditures that can be deferred



or reduced or eliminated should be done, but I don't believe that we will be able to make up that shortfall this year.

**Mrs Fisher:** We've just received, as a matter of fact, I guess dated November 20, some information regarding the NAOP plan and it talks about the total cost differences, if you will, between leaving Bruce A down and Pickering coming up, leaving Pickering and Bruce down and then bringing them up in the future, or neither returning. I'm actually quite surprised at the difference. We're talking hundreds of millions here, but I guess when you get to those numbers, everything is relative. I'm actually very surprised that if both are returned, it's a \$6.3-billion cost by 2001; and if only Pickering is brought back, it does reduce to it to \$5.6 billion. I think that probably happens because there is already \$1 billion invested in it that isn't somewhere else. If neither returns, it is, funnily enough, \$6 billion again.

I know that you mentioned earlier on about cheaper NAOP proposals being welcome, and I'll come to that in a minute. But taking that comment into consideration, I think we might be wise to revisit that, when you know that your alternates really aren't that far apart. Would you agree?

**Ms Clitheroe:** Certainly the issue of keeping as many of the nuclear units running as we can through this interim period, from a financial perspective, we will be pushing in the finance department to see that happen. The barriers to doing that are the logistics that Mr Andognini has described in terms of finding appropriate staff and management to run that, and safety issues. From our perspective, from a financial perspective, the longer we can keep the nuclear units running, the financial condition or picture of the company improves quite dramatically.

**Mrs Fisher:** I don't think you personally have had the opportunity to meet with the people of the community of Bruce yet. It's going to be in the near future that you will have that opportunity, I understand, but I do like the words that cheaper NAOP proposals would be welcome. I want to know what mechanism can be developed to allow outside parties to have more of an influence on those considerations.

I appreciate how it works. I understand that there are many staff within Ontario Hydro who put proposals to yourself and others, and therefore board recommendations happen and the board does what it does with them. I might brag about the community a tad and I'm not ashamed at all to do that, but I think there is a certain intellect within that community that has studied other options and would like to have input that way. How do we get in there?

**Ms Clitheroe:** Any alternative proposal that came in to the company would be seriously considered. If it came in to the chief executive officer it would be referred to our office for a financial review and so on, and presumably to the chief nuclear officer for technical and safety feasibility and so on. I also believe that if a group has an idea to come forward, requests to come in and have a discussion of that nature, it would be very seriously considered.

**Mrs Fisher:** I wonder if one of the policy mechanisms could be changed a little bit, if I might just offer some, I

hope, constructive input here. I've had dealings with Ontario Hydro for a number of years now and I find that while you appear and you make your presentation, there is usually support. Then you go away and it all gets lost over there somewhere. It's very discouraging for those who actually, for the right reasons, want to help. I'm just wondering, given the serious impact that this type of NAOP proposal would produce upon that community, if we can't find a better way to have continuous input. I understand the right of the board to make a decision, but I think there are many things that are missed just because of, if nothing else, geographic separation, and then for other reasons, other agendas, if you will.

How can we as a community there have more continuous input? I'm thinking more along the line of a working committee where you have the workers represented, where you have the community represented, where you have obviously Hydro represented. I can see some value in trying to come up with other solutions because they out there cannot afford to do what Ontario Hydro does to put these plans together, but there are parts of it that have value. Could you see something like that working over the very near, short term to maybe try and come up with one of these other, cheaper NAOP proposals?

**Ms Clitheroe:** Yes, I could see something like that. My understanding is that, in the past at least, a lot of the relationship with a particular community like yours has been from the plant manager level to the community and less so from the head office level, if you will, to the community.

**Mrs Fisher:** I appreciate that, but I see the seriousness here. I think this is the time, if ever, if Ontario Hydro is going to step out and step up in terms of its communications patterns with the community. Now is the time, because it's just, quite frankly, too much for that community to possibly deal with.

**Ms Clitheroe:** I think the corporation would welcome that kind of input. I am aware of the meeting in December you're referring to of the community representatives coming in to have a discussion at the senior level. I think that's a good step forward and something that we should be considering. I agree with that.

**Mr Conway:** Ms Clitheroe, I want to come back to the third-quarter financial statement. Just so I'm clear, I think I heard you tell the committee a while ago that the third-quarter report, which will be released later this week, will show that at the end of the third quarter, 1997, Ontario Hydro will have about \$633 million less in income than planned.

**Ms Clitheroe:** With one minor change, that's the projection that we expect for year-end, as opposed to that which exists at the end of the third quarter.

**Mr Conway:** You expect that your income in the four quarters of 1997 will be about \$633 million less than the plan called for.

**Ms Clitheroe:** That's correct.

**Mr Conway:** I'm now looking at page 17 of the documents that you and Ms Ng brought to the committee on October 28. It's the financial outlook chart, page 17.

Have you got that chart? I presume that's based on that plan.

**Ms Ng:** The 1997 number there that you see was the projection as at the point when the material was pulled together for —

**Mr Conway:** Let me put the question this way. You're telling us that your current projections will show that Hydro's income will be \$633 million less than projected for the full year 1997.

**Ms Ng:** Correct.

**Mr Conway:** If that is the case, what does that mean for the net income situation for Ontario Hydro in this year, 1997?

**Ms Ng:** It will make it about \$110 million before write-offs. The budget was \$740 million. It's going to be \$630 million less, so the net income for the year now is projected to be about \$110 million before write-offs.

**Mr Conway:** What are you expecting again to take in write-offs? What did you plan to take in write-offs this year?

**Ms Clitheroe:** What the third quarter outlines is a potential \$475 million in write-offs.

**Mr Conway:** For the year?

**Ms Clitheroe:** For the year.

**Mr Conway:** That would mean that the net income for the corporation will then be something like a negative \$350 million.

**Ms Clitheroe:** That's right.

**Mr Conway:** Whereas you planned presumably a positive \$250 million or — I mean, this deterioration in income has got to have taken your plan for net income from a positive to a negative.

**Ms Clitheroe:** That's correct. The plan would have had a \$740 million positive —

**Mr Conway:** So for 1997, on the basis of current numbers and projections to the end of the year, you're expecting Hydro to show a negative net income of about \$300 million or \$350 million.

1620

**Ms Clitheroe:** That's right, if we take the write-off.

**Mr Conway:** Can you tell the committee anything about 1997 NAOP costs that will impact on that number? Are there any costs that are likely going to be incurred or assigned to the year 1997 that could affect that Hydro net income number of roughly negative \$350 million?

**Ms Clitheroe:** There are two issues here. One is current expenditures. I believe all of our current expenditures are captured in that number of \$630 million less. Then there is the question of whether or not the board opts to accrue NAOP expenditures from future years into 1997. Were that to occur, the write-off would be much larger and then it would be much more negative.

**Mr Conway:** Ms Clitheroe, can you tell us, as of the latest numbers and projections, what are the total retained earnings that Ontario Hydro could claim as having?

**Ms Clitheroe:** We started the year at \$1.8 billion, so that's what we currently have prior to —

**Mr Conway:** But it's less than that now because you've dipped into that for some other purposes, haven't you, Ms Ng?

**Ms Ng:** The \$1.8 billion is actually as of January 1 this year, so essentially if we're talking about \$350 million negative net income after the write-off, that would take the \$1.8 billion down by \$350 million.

**Mr Conway:** Depending on how you did the accounting, if you were to assign a good chunk of those NAOP costs, whatever they're going to be, to 1997, you could be in a situation where there would be no retained earnings at all.

**Ms Clitheroe:** That's correct.

**Mr Conway:** Final question. You told us that the reason for the slippage in income was poorer-than-expected performance from the nuclear power plants.

**Ms Clitheroe:** That's the bulk of it, yes, and related —

**Mr Conway:** Have the technical people at Hydro given you any comfort that that difficulty is being dealt with and that those problems are not going to continue into the fourth quarter of this year or into the first part of next year, causing the same haemorrhaging with your income?

**Ms Clitheroe:** My advice from the nuclear operations is that some of the problems they were experiencing were with Darlington. There was an important software problem that they were working on with the AECB that was causing our Darlington plant to run at less than 50% capacity. That has now been dealt with and Darlington is virtually, if not completely — Mr Andognini will be here later and you can ask him if it's completely back up to full capacity. We don't expect that specific issue to reoccur.

The nuclear folk and the research lab have done a lot of work up at the Bruce on the condition of the tubes and steam generator. That assessment on the A units has been completed and they have some handle on those units having been down and the possibilities for them coming back up.

There is some work that is scheduled, and I think it may have begun already in the last week or so, on the B units; a similar issue around the tubes. That work is in the discovery phase.

Mr Andognini has advised me that there is still some further discovery to be done. I am concerned that there can be additional problems with the nuclear reactors going into next year if he uncovers another issue which needs to be dealt with immediately and would bring those reactors down. He is keeping me as fully apprised as he can as to what he thinks the technical issues may be.

**Mr Lessard:** Certainly you had \$475 million that you anticipated in write-offs. What were those things for?

**Ms Clitheroe:** Some of it is work in progress that I'm advised by the nuclear operations people may not be useful in the future. We would be considering writing off that if they do confirm that that work in progress on nuclear operations is not useful. That is the bulk of it.

There are some other operations which we have considered, ventures that have been sold or assets that have been sold, and the realizable asset has been less than what was on the books, so there's a write-off there as well.

**Mr Lessard:** Can you give us further details about this work in progress that may not be beneficial or cost-effective?



**Ms Clitheroe:** I can give you only broad parameters. Mr Andognini will be here after me and he could give you more technical details. It is work in progress at the Bruce site which, when the NPAG team has come in and reviewed the work that needs to be done at the Bruce site, they are considering would not have a useful life by the time that work in progress were reactivated. I'd have to ask you to speak to him about the technical issues surrounding that work.

**Mr Lessard:** The extent of the write-offs, the \$475 million, is that something that had been planned for? Is that the amount you planned for or is that something that has changed in your anticipated third quarter financial results?

**Ms Clitheroe:** This is not something we anticipated at the beginning of the year, so it is something that is new in the outlook section of the third quarter.

**The Chair:** Thank you, Ms Clitheroe. When you began your comments, it appeared as though they had been prepared. I wonder if you would be good enough to table that with the committee. That would facilitate some of our considerations.

**Ms Clitheroe:** Yes, I can. They are in bullet-point form, if that is acceptable to you.

**The Chair:** That will be fine. We're used to bullets, so we're able to deal with that.

I know that we have asked, as the testimony has gone on through the afternoon, for certain documents. If they could be tabled with us this week, we'd appreciate that very much. Ms Clitheroe and Ms Ng, thank you very much for attending upon the committee and for your testimony. We appreciate that very much.

**Ms Clitheroe:** Thank you very much.

**The Chair:** If we have further need, we will get back to you again. Thank you so much. You are excused.

Mr Farlinger, if you would be good enough to attend upon the committee, please. Welcome once again to the committee. We appreciate your coming back for a second appearance by public request. I hope you will relax and make this an appropriate exchange. I know the committee have a number of questions to ask of you and I do appreciate your responding so willingly to the invitation from the committee to be here.

If you would, for the purpose of Hansard, just identify yourself and your colleague. Both of you are well known, but for the purposes of Hansard do that and then we can proceed with our questioning.

**Mr Bill Farlinger:** I'm Bill Farlinger. I'm the chairman and presently the president and chief executive officer of Ontario Hydro. With me is Carl Andognini, who's the author of the report which you've been spending so much time on and who is our chief nuclear officer in charge of implementing the recommendations in that report. I appreciate the opportunity of being here again and look forward to having this discussion with you.

A lot has happened since I appeared here seven weeks ago. Foremost is the government's white paper and the new competitive structure, which I'll talk about in a minute. In the meantime, I've followed with interest the deliberations of the committee and I've noted a number of

recurring issues and prevailing questions. Among these, I note four that are particularly important.

They are:

(1) The perception by some that the Hydro board rushed to judgement in approving the nuclear asset recovery plan in August;

(2) Whether there is a credible alternative to pursuing nuclear recovery and whether NAOP will succeed when other recovery efforts have failed;

(3) Whether there is a better way to nuclear recovery than NAOP, such as some form of continued operation or parallel recovery of the A units while still recovering the 12 B and Darlington units; and

(4) Whether NAOP jeopardizes the introduction of competition in some way.

#### 1630

The first issue is the timing of the board's decision about the nuclear asset optimization plan. How long did it take the board to make a decision on NAOP? I'd say a year or more. I say that because the seeds of NAOP had been growing for a long time.

Let me remind you how the board saw its role. Ontario Hydro has an obligation to provide safe and reliable electricity for all of Ontario, and the board has to exercise due diligence in ensuring that Hydro carries out this function. For over a year the board has been aggressive in identifying and responding to the underlying cause of the deterioration of our nuclear performance.

In April 1996, in response to a system failure, the Pickering nuclear station was shut down. Pickering was put on the AECB's watch list, with the possibility of losing its licence. Board and management concerns about sustained improvement in nuclear performance obviously escalated.

The board as a whole became seized with the urgency of the need for change. All board members became involved with nuclear matters. From June 1996 onwards the Pickering situation was a regular item at all board meetings, with status reports from the station director.

The level of concern was reflected in personnel changes. The Hydro board became more interventionist and three senior members of nuclear management were replaced. There was increased involvement of outside resources. Reliance on Hydro's own resources had not turned around persistent performance problems, and peer reviews pointed to the need for cultural change in nuclear.

In August 1996, the president contracted the services of Gregory Kane, a US expert with experience in improving nuclear ratings. His recommendations and benchmarking work were major inputs to the Ontario Hydro Strategic Plan for Excellence in Nuclear Operations, approved by the board in August 1996. The plan was based on achieving performance excellence in safety, production and cost. It focused on reducing maintenance and procedure backlogs and housekeeping and material conditions to improve the quality of operation and maintenance. Gregory Kane's analysis was the first third-party perspective on a recovery strategy.

By the fall, it was clear to the board that while some progress was being made with this plan, something more

comprehensive, integrated and accelerated was called for. Once again, the Hydro board intervened. A second independent opinion was needed, and it took shape in the form of US nuclear expert Carl Andognini and the nuclear performance assessment group, which was engaged in December and began work early in 1997.

The mandate of the team was to conduct a systematic, comprehensive and brutally honest assessment of Hydro's nuclear operations, and to make appropriate recommendations for returning Hydro stations to world leadership.

An overview of the independent integrated performance assessment process was presented to the nuclear review committee in April 1997 by the nuclear performance assessment group. The team discussed the mechanism for performance reporting, and a nuclear finance recovery team was established. The chief nuclear officer presented the board with monthly updates right up to the July meeting preceding the board decision in August. In addition to these monthly updates, Dr Mohan Mathur, the chairman of the nuclear review committee, and Don Fullerton, the chairman of the audit-finance committee had an oral briefing from Mr Andognini on the NAOP recommendations prior to the August 12 board meeting. The board learned through these updates that the nuclear plants were in worse condition than thought at the beginning of the year, and that far-reaching interventions to turn their performance around would be required.

The independent integrated performance assessment was completed and the report documents were distributed to the board on August 6. On receiving the IIPA findings indicating the severity of nuclear problems, and facing regulatory uncertainty with respect to the continued operation of the stations, the board decided on August 12 to initiate a course of recovery action.

This decision to take action emanated from a full day's intense discussion on the assessment of nuclear plants. This assessment considered, among other things, the impacts of recovery on reliability, safety, the financial situation of Hydro, options to NAOP, the impacts of carrying on business as usual and the effects on stranding if there was a change in the industry structure.

The discussion and ensuing decision grew from the previous year and a half's analysis and assessments. It might appear to a third party that technically the board made the decision in one day, but I think it's fair to say, as Dr Mathur's testimony noted, it was the experience of the last year and a half that drove the board decision.

Concerns have been raised about further detailed financial analysis taking place after the board approval in August. This is not an unusual business practice. You heard board members Bullock and Kerr mention that the process used at Hydro with NAOP is in keeping with best practices in large investor-owned corporations like Noranda and Laidlaw. This is consistent with my own experience, both in public accounting and as a board member of organizations facing large decisions.

Let me put the financial perspective into the context of broader risks as the board saw it. The board decision to proceed was not a judgement that analysis and a review of

options weren't necessary or valuable; it was a judgement about timing, urgency and flexibility. The board had a second opinion from Carl Andognini's review team confirming that the situation was poor and getting worse. So the board decided to begin recovery in August; a judgement to begin now and let the analysis catch up later, analysis that could corroborate or modify, although not likely reverse, the course of the NAOP decision.

The board decision to act prior to a more detailed financial analysis was prudent from a safety and reliability perspective. The risks that most seized the board revolved around what would happen to safety margins, output and licensibility of the stations without undertaking recovery immediately. Key issues were dealt with. For example, the recommended Basis for Continued Operation identified activities required for continued safe operation of the stations. Questions around the analysis were not central to the decision to proceed.

In the board's view, the marginally acceptable conditions of the plants represented an immediate threat to their licensing, and to delay beginning recovery for a couple of months of analysis while the plants continued to deteriorate would have been neither responsible nor prudent. Dr Mathur expressed this in his testimony when he noted that the situation was getting pretty bad and that we had to address the problem as soon as possible. If we had delayed, I am sure you would now be critical of that, and rightly so.

Dr Bishop also signalled the seriousness of the situation in her testimony, noting that "It would only be a matter of time before other stations reached the operating level of Pickering; that is, in danger of regulatory shutdown." The risk of regulatory and/or operational shutdown or curtailment was seen by the board as overwhelming.

But while safety was paramount, other factors were not forgotten. The board passed a resolution making NAOP's approval conditional on future work and analysis. Implementation of the board's decision is subject to determinations on spending, scope and timing of recovery actions.

Follow-up work ensued. The audit and finance committee of the board, as well as the full board, spent two days in Thunder Bay on September 7 and 8, financially reviewing NAOP, the lay-up provisions and the associated impacts on generation. Ernst and Young were asked to conduct a financial and risk assessment. Their review and recommendations were presented to the board on September 9.

The board requested detailed descriptions of more options around closing the A plants and their financial implications. That analysis was reviewed on September 26 at a joint audit-finance and nuclear review committee meeting of the board. They also reviewed the Ernst and Young report and its recommendations.

You have heard Ernst and Young and Eleanor Clitheroe describe how the bottom-up financial analysis will take the form of a going-forward assessment as the need for financial commitments arise, and that a monitoring, analysis and integration process will subject



NAOP initiatives and expenditures to review through the business planning process. So the board did see NAOP as a flexible plan, not as something cast in concrete.

1640

I have already detailed the depth of the board's involvement with nuclear issues and, in particular, the deliberations leading up to the decisions taken at the August board meeting. Like the Hydro board, the government was advised, through its board participation and regular posted reports, on the serious nuclear situation and the proposed recovery plan.

The second issue that has emerged during the committee discussions is whether there are any credible alternatives to trying to recover nuclear performance and whether Ontario Hydro, this committee and the people of Ontario should have confidence that the NAOP recovery will work when other Hydro recovery efforts have failed. Instead of undertaking the cost of nuclear recovery, could we not look for non-nuclear alternatives? The answer is no, at least not in the next several years. If you don't want to sink money into restoring the fleet of nuclear units, what would your alternatives be: gas-fired generation, coal-generated power from the US, surplus hydroelectric power from Quebec? We are planning to use our inter-connected facilities with the US and Quebec to the maximum amount over the next two years. Unfortunately, that will only deliver about 15% of our requirements.

What about new gas-fired generation in Ontario? You'd need at least a couple of years to build the plants, and so you'd hope that the deteriorating nuclear units would keep you going until then. That's a bad bet. Nuclear's current sunk costs have to be paid anyway, and the going-forward cost of the nuclear B units and Darlington will be under two cents a kilowatt hour. Non-nuclear alternatives are not available in large enough quantity, in short enough time and at low enough cost to be a real alternative. As we move into a competitive environment, there will be time to gradually replace nuclear with other options if the market dictates that direction for investment. But we simply need the nuclear power we have for quite a long time yet. The bottom line is that we don't have any choice but to pursue nuclear recovery. But what confidence is there that this recovery will be successful? There are several reasons.

First, the nature of the recovery plan is different from previous improvement efforts. The IIPA looked both deeply and broadly in an integrated fashion across all the nuclear stations. It followed a well-accepted, rigorous procedure that has proven successful in the United States. While its findings reflected those of other assessments, the IIPA organized them in a systematic way that went to the root causes of the problems and provided a foundation for a comprehensive recovery plan. The root causes IIPA uncovered were mostly ones of management practices, systems and attitudes, not those of hardware. This is similar to the US experience, where there has been success in nuclear turnarounds.

Second, the nuclear performance assessment group team should enjoy the utmost confidence of Ontarians. It is

a handpicked group, selected on the basis of sound reputation and demonstrated track record in nuclear plant recoveries.

Third, while there is a limited number of qualified workers available for recovery, the NPAG team has confidence in the quality of Hydro's nuclear workers. They are highly educated and want to do a good job. Their problem is the lack of training and effective operational systems. These will be provided under the NAOP plan.

As you're aware from correspondence among John Murphy, Hydro and your committee, Hydro has identified barriers in the collective agreement. I think you know that John Murphy and the Power Workers' Union have indicated a willingness to introduce more flexibility around the agreement to allow the recovery to take place expeditiously. I know that Mr Murphy, the union and the workers all want to see recovery take place just as eagerly as management does. I'm confident we will be able to work out solutions. That the PWU has proposed that an alternative to NAOP should not be taken as lack of confidence on their part that NAOP can succeed. They have suggested that nuclear recovery can be undertaken all at once across a broader front than the NPAG team's experience indicates.

As for the society bargaining unit, I have talked to John Wilson and he has given me assurances also that the society too is willing to show flexibility in ensuring successful nuclear recovery. The reason I raise the labour issues is that inflexibility around adapting our collective agreements to the challenge ahead can absolutely torpedo our efforts at effective and timely nuclear recovery.

The third issue is whether there are credible alternatives to NAOP in terms of nuclear recovery. As Carl Andognini and Rick Machon have indicated, our assessment of the qualified resources available limits the recovery to 12 units over the first three years, thus the layup of the remaining seven. As Mr Machon noted, the question of availability of resources is not just a matter of the number of workers, but also their skill mix and the lack of management and operational systems to be able to absorb them into a first-rate operating and recovery team. Even if we had enough skilled workers, we still would not have the management systems in place to deploy them effectively across 19 units at the beginning.

Is there any flexibility around the layup plan, say, laying up less than seven or delaying the layups? Laying up the older units to recover the newer and larger ones is a core conclusion of the NAOP judgement. I know it is Carl Andognini's view that the more you stretch your resources, the less your chances of success. From my point of view, reflecting the board frustration over the last two years, what we can't afford is yet another failed turnaround effort. To use a basketball analogy, the board thought it wiser to take the sure layup rather than risk the three-point outside shot.

What about other variants? Might you recover 12 units and continue to operate some others as you got the 12 into shape? Would you be flirting with the safety margins of the units you don't recover? Would you jeopardize your

effort on recovering 12 by still having to operate a couple more? What about letting a third party recover and/or operate some units while your NPAG teams recover the 12?

I said on my first appearance that if anyone could show us a better plan we would certainly want to make adjustments. We are prepared to be flexible around the perimeter of NAOP timing of lay-ups and possibly involvement of other parties. We are mindful of the impacts of layups on the Bruce community, but we must consider the best option from the perspective of the province as a whole. We will continue to review our plan and change it where appropriate. If circumstances were to change dramatically, such as a big change in natural gas prices, we would revisit the timing and span of the layups and the recovery of units.

The fourth issue is the question, is NAOP compatible with the framework of impending competition? When directors Jim Bullock and David Kerr appeared before you, they were asked whether the Hydro board had considered the implications of NAOP in the context of a competitive industry structure. Mr Bullock said that the analysis was projected against the existing monopoly structure. Mr Bullock's response was correct. But the board has considered what a competitive structure might look like and what Ontario Hydro's role in it might be. In fact, Hydro's corporate strategy not only contemplated a future competitive structure but argued strongly for the introduction of retail competition. The problem of analysing the financial impacts of the recovery plan against a future competitive structure is that so much is unknown and depends on what the elements of that structure are and when it would be in place.

Furthermore, Hydro owes its obligations, and the board its due diligence to discharge them, under the current monopoly structure as long as it's here. The obligation to keep the lights on reliably and safely rightly dominated the board's thinking. But the board was not unaware of a possibility of changes in the industry. Where a specific issue, like stranding, could be addressed, it was part of the discussion at the board.

#### 1650

We now have the benefit of seeing the future direction described in the government's white paper. In that context too, NAOP still looks like a reasonable, in fact a necessary, course of action.

The markets will open up to retail competition about the time that the laid-up A units would have to justify their recovery investment. The decision to sink money into the A units or not would depend on how they could withstand the test of the competitive marketplace. The cost of their refurbishment would have to be recovered through revenues and sales earned in that marketplace.

The costs of recovering the B units and Darlington would be collected during the transition years to competition simply because their continued output and the measures that will guarantee it are needed to keep the lights on, and the incremental cost of NAOP on a kilowatt-hour basis is so attractive that you would pursue

the investment whether you were a monopoly looking to keep the lights on or a generator competing in a marketplace and looking to earn a return on your investment.

But what about the power to replace the loss of the laid-up A units? The white paper calls for supply decisions on replacement power during the transition period to be subject to market tests. Generators from inside and outside Ontario will be able to bid, and have been asked to bid, the additional needs created by the layup of the nuclear units through an interim market run by a group within Hydro that is separate from the generating business. That would mean that the proposed increased fossil production identified in NAOP would compete with other generators in Ontario and outside the province.

The nuclear recovery plan does not jeopardize competition. On the contrary, the layup of some of the nuclear generation creates a larger contestable market.

In conclusion, I propose that the Hydro board's decision to move ahead with the nuclear asset optimization plan was not only the right decision in light of their current obligations but a planning pathway that will fit the initiatives and transition work ahead in implementing the direction of the white paper. There are many details and processes yet to be worked out in making the new competitive structure a reality. So too, there will be some flexibility around NAOP's implementation if that will better meet our goals of improving safety and performance of the billions of dollars of assets that the province has invested in nuclear power.

Looking back on the events of 1997, I'm confident that those documenting the history of our industry will note two landmarks: (1) It was the year that the Hydro board of directors seriously grappled with the root causes of nuclear problems and took decisive action to correct them; (2) it was the year that the Ontario government seriously acknowledged the monopoly industrial structure as a major contributing cause to inefficient investment and moved to replace it with the discipline of a competitive market.

Thank you, Mr Chairman. Those are my prepared remarks.

**The Chair:** Thank you, Mr Farlinger. I hope we can have a copy of those remarks at your earliest convenience.

**Mr Farlinger:** Indeed.

**The Chair:** We'll begin the questioning, five minutes a round. I will remind members of the select committee that there will be a vote, I think about 5:45, so we will stand down at that point and return at 7 pm. In the meantime we'll continue the questioning as long as we can, and we'll begin with Mr Kwinter.

**Mr Monte Kwinter (Wilson Heights):** Thank you, Mr Farlinger. I want to address a couple of concerns that I have. Number one is this letter from Mr Gourley to Ms Clitheroe in response to a board request, a memorandum for a rate increase. It was an overall rate increase for 1998. In Mr Gourley's response he says, "It does not appear that the board had sufficient information with respect to the costs associated with the proposed nuclear asset optimization plan...to determine the rate level which



would enable Hydro to meet its statutory debt retirement obligations."

Also, in the Ernst and Young report, they said: "Within the NAOP plan certain major capital expenditure items have been identified as key risks. However, the potential cost estimates have been excluded from the analysis and the exclusion of these costs could have a material impact on the analysis and the decisions."

We have a situation where Ernst and Young have taken a look at what went into the decision and said that there wasn't enough information of some key risk factors to enable that decision to be made. Mr Gourley, in a letter to Ms Clitheroe, says that there's no justification — and there are some concerns with the rate increase; I want to get to the rate increase in a minute — there isn't sufficient information to determine whether or not these costs associated with NAOP would enable the statutory debt retirement obligation.

These are two outside groups, one the Ministry of Finance, the other Ernst and Young, who are saying effectively that there wasn't enough information for you to make this decision, yet we just heard from you today that you felt there was ample investigation and that, notwithstanding there could be some adjustment, you had the necessary information to make this decision. Do you have a comment on that?

**Mr Farlinger:** Yes, I'd be pleased to. First, Mr Gourley and E and Y are on different missions. The Hydro board has had to look very hard at whether or not it should raise rates. The government has said, "Don't raise rates," and this has been exacerbated by the decision that the monopoly will end and the competition will come. We think that's a good thing, but I guess we'd like to know where the financial position of this company is going to be at the time that happens and what the plan for restructuring this company or these companies will be.

There's an ongoing discussion and dialogue between the company and the government, saying: "You tell us not to raise the rates, but under the legislation we're required to raise rates in a monopoly situation if we aren't going to meet certain tests." That's the test you referred to, Mr Kwinter, which is sort of a technical calculation, but at the moment it means we're supposed to budget for a \$600,000 annual profit. Why do we not raise the rates so we can budget for a \$600,000 profit? There are technical ways of dealing with that. One way of dealing with it is to get a directive from the government saying, "Don't raise rates and don't pay any attention to this section of the act." There have been a number of discussions going on and that's what Mr Gourley is writing to Eleanor Clitheroe about.

E and Y were asked to do a couple of things for us after the August meeting: to review a bunch of the financial calculations and also to ensure that we were covering off every detail and had it documented, so, if you like, the paperwork on all the decisions. One of the things they fussed about was whether, when Carl had dealt with six different options that we could go through on this plan, did he have a nice, tidy piece of paper setting them out? No, he didn't. He had given the board what the six options

were. So they told him to tidy up his act and put this into a nice piece of paper, and I'm sure that paper's been lodged with this committee.

They also said, as his report had said, that certain things weren't provided for in the recovery plan. That's what you were referring to, Mr Kwinter. There were three or four things of some significance, none of them of any material significance to the sort of decision we were taking, but for purposes of tidiness and clarity. Auditors are funny people. They cover off all the loose ends. They said, "You didn't estimate the costs for this issue and that issue." Carl can tell you better what they were, but what I had identified was that none of these things were of significant money that they would stop the operation. After all, if the net result is that we're going to create power in those 12 units at a marginal cost of less than two cents a kilowatt hour, if we had had another two tenths of a cent a kilowatt hour, it doesn't make any difference. That's a very competitive cost for power.

It's true that they wrote that report and some of those items were not identified in terms of costs because they can't be. We don't know what the estimate is in a couple of those cases yet. We do know it's not enough to stop the program.

1700

**Mr Lessard:** You began by referring to the issues that have been raised by questions throughout the hearings and you indicated that one of the issues was whether Hydro rushed into NAOP and said, "This is something that's been going on for a year or more and the seeds have been growing for a long time." Those were your words.

**Mr Farlinger:** Correct.

**Mr Lessard:** When you said "for a long time," I'm assuming you're referring to even more than that year that you've been looking at NAOP, but for a longer period of time than that. I wonder if that's something you'd agree with. I'm wondering why the decision to get into NAOP hasn't been going on even longer than a year.

**Mr Farlinger:** That's a fair question. Certainly I think knowing that things are bad is a growing awareness over time, and certainly there were some reports. You've had some people here. Ken Hare wrote a report three or four years ago saying that there were problems in the nuclear.

The thing that made it crystal clear that we had big problems was when that whole plant went down and didn't come back when it was supposed to come back. You didn't have to be any sort of nuclear expert to know that we had big, big trouble when Pickering went down. That's a year and a half ago.

**Mr Lessard:** You said that when you consider other options, there aren't any non-nuclear options that you're really considering seriously at this point. I'm wondering whether, realistically, you expect all of those nuclear reactors that you expect to be down to come back into service.

**Mr Farlinger:** I think they could all come back, yes. I'm not saying they will all come back; I'm saying under the right circumstances they could all come back. One of the major right circumstances is what the price of natural gas is going to be in two, three or four years from now.

**Mr Lessard:** Do you expect that the price of natural gas is going to change substantially, either up or down?

**Mr Farlinger:** A lot of people do. That's a real contingency either way.

**Mr Lessard:** You made another point as far as the refurbishing of these nuclear power plants and having to try and determine whether the price of the power that will be generated by those plants is going to be competitive, considering coming into a competitive environment. Do you feel, given the circumstances that you know now, you will be able to undertake the work that's necessary to bring those plants back into operation? Will those plants be competitive in a competitive environment that you anticipate after the year 2000?

**Mr Farlinger:** The bellwether cost of power right now that is talked about colloquially in the industry is 4.5 cents for natural gas electricity. Today's estimate for bringing back Pickering is 2.5 cents. For bringing back Bruce, today's estimate is 3.5 cents. That gives you a margin below what the competitive cost of power is as of today. Will that be the competitive price of power three years from now? I don't know.

**Mr Lessard:** In response to a question that I had asked earlier with respect to write-offs in the amount of \$475 million, I had asked what sort of work in progress was represented by those write-offs and it was suggested that I put that question to Mr Andognini. I wonder if you could give us some idea as to what that work may be?

**Mr Carl Andognini:** Some of those are not, but most are nuclear-related write-offs and I personally can't tell you what they are. I don't know what the write-offs are.

**Mr Farlinger:** I guess we could have Eleanor send the committee a list of what those prospective write-offs are, if you'd like.

**Mr Lessard:** That might be helpful, because it seemed as though she was indicating that this was work that was in progress. I think she had mentioned Bruce specifically and indicated that this was work that wasn't going to be beneficial in the long run and it was technical in nature. That was why she had indicated that Mr Andognini may be of assistance.

**Mr Andognini:** There was one computer system that was under development that went over budget and didn't perform in its trial period the way it should have been done and has been cancelled. I know that's one of the items. I do know that another item is relative to Bruce B, unit 2, which is partially written off, and that unit is one that's out of service now. Those are the only two that I know relative to Bruce B. The one she was talking about is a computer system that was being designed by AECL that had some difficulties in its trial period and has been cancelled.

**Mrs Johns:** Thank you both for being here. When you drew to our attention that it was seven weeks since you were here last time, I think a couple of minutes ago I was quoted as it being 15 weeks, so I think it's gone a lot longer for us than for you.

I just wanted to ask you a couple of questions. Today, for the first time, we heard that — and my quote here would be, "The Hydro board became more involved." You

started to talk about them becoming more involved with, I think, Caine, and then bringing in Mr Andognini, and also with the change in some of the senior management staffing in generation. I guess we didn't know that before today and I was wondering if you could tell me the role that the board may have played in changing senior management, how that may have changed, so that we can see that there is some evolution from the early days of your tenure.

**Mr Farlinger:** The first thing you referred to was, after Pickering went down, the senior management did fire the leader of Bruce A. Some of the board members thought we were living in the old Hydro culture where nobody gets fired and thought other senior people should be fired. I spoke to the president about the leader of the nuclear, Ron Field, who was the head of all the nuclear, and Mr Charlebois, who was the head of Pickering. I said, "How can you leave those people in place with this thing in such a shambles?" He had a lot of reasons he didn't want to fire them, so finally we had a meeting of the five senior directors and Mr Kupcis, we had a discussion about it and he decided to fire them. So that was a hands-on involvement the board had with respect to the management issue, if you like.

Later on in the fall, when the nuclear excellence program wasn't doing much, at least in the opinion of the board, we had more discussions with board members. I myself had more discussions with Dr Kupcis about getting some, what I call, insurance. I said, "You say you think these people, mostly internal people, can fix this thing and we aren't sure they can, so we need some outside insurance on this thing." We had a number of discussions about that and finally convinced him that he should get on. He went down to INPO, found Carl and did a good job of hiring all those people. So the hands-on job of doing this was the CEO's. The impetus came from the board.

**Mrs Johns:** One of the things you said that I agree with of course — and I think I've made my position pretty clear throughout this, that I think 1997 will be recognized as the year the board finally took seriously the problems at Ontario Hydro and grappled with them, and you didn't go further. I would say part of that is because you were the chair, and I want to say that I think we owe some thanks to you for that too.

1710

We come through here and we talk about hiring Mr Andognini, and I don't want to be offensive. I guess I didn't know Mr Andognini was going to be here when we started to talk. We've heard for 10 years about how they've come up with nuclear plans to be able to move forward and they don't seem to be able to implement them over there. I guess if we've learned anything we've learned that we should be a little sceptical of Ontario Hydro and their plans. They started way back with Franklin and they keep going every time.

I want to know from you, Mr Farlinger, first of all, if you've got some kind of iron-clad deal to keep Mr Andognini here for the next four or five years till we get this done and how you're going to make sure this plan is



fully implemented so that we don't have another failure like we've had for the last 10 to 15 years.

**Mr Farlinger:** I guess you take things on faith at first, and then how you find them. Certainly we acquired Andognini based on his reputation and based on the recommendation of the INPO people. You know what INPO is. That's the self-regulating agency of the nuclear industry in the United States that has done such a wonderful job. After Three Mile Island, this thing was set up. Yes, they have a regulator just like we do, but the industry itself has taken the decision that if we have any more serious problems in this industry, we're all losers. Therefore, we're going to self-regulate ourselves.

They have a very tough marking system which is on a simple report card system. You get 1, 2, 3, 4 or 5; 1 is good and 5 is you're about to be closed down. That's something that everybody can understand. It isn't a big, long list of potential things that you might do to fix your thing.

I was told we couldn't be on that system. We now are on that system. There is a world nuclear organization called WANO. It is related to INPO. It has a bunch of INPO people on it and so on and we are now being monitored by WANO. We weren't before. We had our own system of internal Ontario Hydro people marking it. We've got that system, by the way, to monitor how we're doing. That's how we got Carl and his merry men, as I sometimes refer to them. They're not very merry; they're sort of serious, dedicated people.

Can I just wander for a minute? This I find interesting, that these guys think — a few of them are in the twilight of their careers and others aren't. They see this as the biggest thing that — well, it is the biggest thing by a mile that's ever got in trouble in nuclear: Ontario Hydro. You know, if you want to be first, we're absolutely first by a mile in terms of the size of our operation here and the trouble we're in. They are incredibly dedicated people because in their profession they've taken on the biggest challenge that's ever existed.

That's all positive and everything we've seen of these people so far is good. Now we have to start monitoring. As capable as we are as a board of monitoring, we've got this outside agency also to monitor our progress and give us marks and give us simple report cards we can understand whether we're A, B, C, D or E — WANO does A, B, C, D or E, INPO does 1, 2, 3, 4 or 5, the same thing.

**Mr Kwinter:** I have two questions for you and then my colleague would like to follow up. We talked about some of these risks that hadn't been accounted for from a financial point of view. One of the things that has been raised — and you've said that the seven reactors that are going down may come back, but they may not. If they don't, there's a decommissioning cost and that's calculated at maybe \$700 million, which gives you a \$5-billion obligation. Do you not consider that a relatively major, outstanding, potential obligation?

**Mr Farlinger:** I'm not sure what the question was. I understand that there will be decommissioning costs, of course. That would be part of the equation.

**Mr Kwinter:** It's not included in the NAOP costs though. They haven't projected them. That was one of the concerns that was expressed by Ernst and Young. I think Mr Andognini, in his testimony earlier when he appeared, said that it was not calculated in.

**Mr Andognini:** It is not in the NAOP program, sir, and it wasn't put in the program because it's a cost that will be incurred whether NAOP exists or doesn't exist. What we're trying to do and what we have done is put a program together that really turns a liability into an asset. We have studies underway right now by Mr LaGuardia that are investigating what the cost will be associated with decommissioning for those units.

**Mr Farlinger:** That'll be part of the equation.

**Mr Kwinter:** One last question I have is that in the white paper it suggested that as part of the stranded debt there could be a swap of debt for equity. Do you have any idea of what proportion of that debt would be swapped and how that's going to be handled?

**Mr Farlinger:** When we get into stranded costs, there is a basic assumption that affects the value: What will the competitive price of power be in competition? A guess that a lot of people are using is that 4.5 cent figure I gave to you. You might think naturally power will end up being at the lowest cost of replacement power, if that's the cost. But three years from now, will that be 4.5 cents or four cents or 3.5 cents or five cents? Nobody's too sure about that. There are pretty big swings in these things and those small half-a-cent swings make an enormous amount of difference on whether or not you can service your debt.

We've made calculations, as you know. I think you've had that information here. Sixteen billion dollars was the figure in our annual report last year. I think that was based on four cents. I can't give you a better answer than that.

**Mr Conway:** Mr Farlinger, the government announced the white paper a couple of weeks ago and that clearly had an impact on all that we're discussing. Is there a business case for Ontario Hydro over the next couple of years to increase its rates, taking account of the fact that competition is coming, taking account of the fact that income has been slipping, according to what Ms Clitheroe tells us, because of ongoing problems in the nuclear power division? Given those kinds of factors and the issues of stranded debt and stranded assets, is there a business case for a rate increase over the next couple of years?

**Mr Farlinger:** Our rates for residential and industrial customers are quite competitive with Michigan and New York state. They are not competitive with Quebec, they are not competitive with Manitoba.

But looking to our neighbours to the south with whom we might have the most competition, particularly given that we've got a lot more ability to export and import power to the Americans than we do have transmission capacity to Manitoba or Quebec, we probably could go for a little increase and still be competitive. It also depends on where our Canadian dollar stands, of course. We are benefiting very much from the low Canadian dollar at the moment in that comparison.

**Mr Conway:** Would NAOP specifically, and Hydro's current corporate planning generally for the next couple of

years, change if the Ontario government were to say, "We will, effective January 1, 1998, not guarantee any Hydro debt beyond that which has been incurred and accounted for up to but not beyond that date of January 1, 1998"?"

**Mr Farlinger:** Would that cost us more?

**Mr Conway:** Would that change any of your planning?

**Mr Farlinger:** Let me think about that for a minute.

**Mr Conway:** The question is, would NAOP be changed specifically and would Hydro's corporate planning for the next two or three —

**Mr Farlinger:** I don't see how it could be. I think we'd have to pay whatever interest rate we had to pay to roll over the debt. I've said to you before that we think we can get along on a cash flow basis here without retiring any debt, but we'd have to roll it over.

1720

**Mr Conway:** Let me come to that because the committee I think — some of us at least — has been distressed to find out again as late as this afternoon that there appear to be software problems over at Darlington, the newest of the plants, that have caused a deterioration in performance and therefore a deterioration in 1997 income such that income for the year is going to be \$633 million below plan. That means that we're going to probably have negative net income of about \$350 million for this year. Hydro tells us that in the calculations that undergirded NAOP — and that's before these latest problems — you were looking at four years at least of negative net income. That's before competition.

Your retained earnings are draining away. You're looking at very tough financials for the next two or three years and we're heading into competition. The question arises, what kind of shape are you going to be in as a corporation to implement NAOP in whatever form is finally decided and at the same time prepare for the onslaught of competition which, in the short term, is clearly going to have downward pressure on your revenues, which are already a problem?

**Mr Farlinger:** Mr Conway, our nuclear is in a bad mess. That's why we're into this program. What the company is trying to do, what the current management is trying to do, is to do the best they can with a bad mess. The bad mess may cost the people of Ontario some money.

**Mr Conway:** Is that the issue that the committee really should be focusing on? If I read your 1996 annual report, if I listen carefully or even casually to a lot of testimony I've heard over the last number of weeks — and this has really been brought to the fore with the release of the white paper — the real question for the taxpayer is just how big is that stranded debt charge going to be, where is it going to be placed and how is it going to be discharged.

Is the real corporate strategy at Hydro these days, Mr Farlinger, to say, "Well, the government" — because you've been reported as being a bit uncomfortable with at least a couple of components in the white paper, and I can understand that. We're not going to have a rate increase for a couple of years, but that's really immaterial because the real rate increase that awaits the ratepayers of Ontario Hydro and the taxpayers of Ontario is this multibillion-

dollar stranded debt. It may be as little as \$12 billion; it may be as high as \$23 billion.

**Mr Farlinger:** With respect to the stranded debt, I'm not dismissing the fact that we have problems. We obviously have problems and it's tight whether or not Ontario Hydro can compete without having the government pick up some part of the debt. There's no question about that. But don't forget, we're servicing the stranded debt right now. There's no cost increase above what we are today and we are competitive with our neighbours at today's prices. I'd say to you it's a narrow thing whether or not the consumers can't pay the stranded debt charge because we're paying it today.

**Mr Lessard:** What sort of flexibility might you be looking at with respect to dealing with your employees?

**Mr Farlinger:** We have very difficult labour contracts at the moment in terms of mobility of our workers. It's all based on a seniority system. If Carl wants to move a new nuclear guy from one spot to another, everybody else who has more seniority than that person, even if he doesn't work in nuclear, has bumping rights and can get a chance to take the job on first. It's enormously difficult and the process takes six months or a year to get through. We need some relief from those things in order that he can move with reasonable dispatch to move his resources around to where he needs them. We think the unions are going to work with us to help out on this problem.

**Mr Lessard:** Is that the biggest factor you see, mobility and seniority, those two factors?

**Mr Farlinger:** The seniority affects the mobility.

**Mr Lessard:** Okay. I take it that there are a number of unions that you have to deal with?

**Mr Farlinger:** Principally, two.

**Mr Lessard:** And which are they?

**Mr Farlinger:** There's the Power Workers' Union, which is basically the blue collar workers, and there's the society, which is basically the engineering staff, almost up to middle management levels.

**Mr Lessard:** And you have reason to be optimistic with respect to trying to achieve that flexibility? Have you been having some ongoing discussions?

**Mr Farlinger:** We're having a lot of ongoing discussions and we are optimistic, but we haven't really got it to the test yet. We're about there. We're about to find out whether the good talks we've been having will be put into action, but I stated that in the caveat in my prepared remarks. If we don't get this, it's going to seriously set back this program.

**Mr Lessard:** Thank you.

**Mrs Fisher:** I will be pleased to share my time with Mr O'Toole. Welcome back. I'm sure you haven't spent as many hours — maybe a few of them, though — watching the proceedings of the hearings to date. I have to say that after about seven weeks on this committee, one is much wiser with regard to what they thought they knew before and what they now know, I think all because of the type of input we've had.

I would like to start by saying that bad news is not always the most easily accepted, but I do respect the fact that finally Ontario Hydro is dealing with something that



some of us on the outside could see happening and ultimately did happen. Now we have a chance, I guess, to recover our situation.

I just have a very few quick questions. The IIPA identifies human resources problems; I don't think anybody has denied that. Nobody in any of the presentations nor of this committee has argued that at all.

I had a request to meet with a couple of unions already that haven't been named so far in the recovery process and that is of the construction force. These people are the ones who built the sites. I just don't know; I don't hear anything. I hear a lot about the PWU and the society and I just wonder what room there is to lean on some resources of people who worked in the construction of these plants and will have to be called on to refurbish as well.

**Mr Andognini:** I'd like to address that, Mrs Fisher. The problem is not just resources. You've got to go back to the late 1970s and early 1980s, when Ontario Hydro was a very strong engineering-construction organization. When the needs for plants died out, that organization never shifted from an engineering-construct to an operate-and-maintain organization, and that is true today.

The processes to support operation, the management systems, the programmatic issues that are required to support day-to-day operation of a nuclear facility are not currently in place. Just adding resources would tend to make your problem worse instead of better. All it would do is increase costs, delay scheduling and cause confusion.

**Mrs Fisher:** What I'm getting at, though, Mr Andognini, is —

**Mr Andognini:** I have talked to the building craft union. I recently sent them a letter and told them that I will meet with them just as soon as we have the conditions with our own unions resolved. I can't go to them until the conditions with our own union are resolved. Once that's done, I will meet with them.

**Mrs Fisher:** The only reason I raised it is because some of those live in my backyard. They've now started knocking the door as well and saying: "Hang on. We're —"

**Mr Andognini:** You can tell them that I've written a letter and that I have agreed to and will meet with them as soon as our issues are resolved.

**Mrs Fisher:** Okay. Mr Farlinger, you talked about an outside agency reviewing the ongoing progress of the NAOP recovery plan, which —

**Mr Farlinger:** I'm sorry. They will be giving us a review and a rating on each of our plants every 18 months. In a sense, they're reviewing the plan but they're not taking the plan and saying, "If you accomplish this much by this and that date." They do an independent review of each plant and we get an A, B, C, D or E.

**Mrs Fisher:** Is that WANO, just to clarify?

**Mr Farlinger:** WANO, yes.

**Mrs Fisher:** I agree with your comments earlier about the price of gas. One of the things that needs to be incorporated in the other half of that equation, I think, is the environmental impact and those costs, if we could put a price to them.

**Mr Farlinger:** Yes, indeed. Right.

**Mrs Fisher:** If we're going to look in the nearer future, which I hear some hope today — again, I don't mean to be disrespectful — that there's a possibility of rethinking the process of the NAOP recovery plan, are you in support of the public-private partnering proposal that was put forward to Hydro in 1996, I guess it was? We were going to have the consortium here but they're not here today. There was a proposal that was put for the recovery of Bruce A and it did call for public-private partnering. Are you willing to look at that again and see what opportunities are there?

1730

**Mr Farlinger:** Absolutely.

**Mr John O'Toole (Durham East):** I'll just take a couple of minutes quickly. I really have a two-part question, if I may. I'm really picking up on the theme of where we've been, to predict where we're going. The 1996 annual report serves as a good warning shot, if you will, and I'm just going to specifically refer to the write-offs of \$2.56 billion in that report. It refers to the adequate nuclear recovery plan. "Nuclear recovery plan" has a ring to it. It sort of sounds like the recovery plan of Mr Andognini. That's the first part, if you'd like to respond to it.

Secondarily, picking up on Mr Conway, I find this a most fascinating read. I did early on and it's been reinforced as we've moved along. On page 19, actually the footnote, which refers to admittedly what you have said, how we are going to deal with this big package here. We've got \$15 billion or more of debt that we can't handle and be competitive. This is right in here. I could quote it. You know it. I'm sure you probably were involved in writing it.

Those are the knowns. The inconsistency overall that I'm wrestling with is saying — and you've admitted it here today. I think you're quite forthright; I've read the newspaper columns on your concern about rates and the government's wish to freeze them, the impact on jobs; being competitive. Those are inconsistent themes. If a corporation is dealing with a serious debt burden, and there is some room in the market to kind of do this, basically do you think that we can rely on recovering the debt and keeping rates frozen? That kind of sums it up into a question that the Chair has permitted me to ask. Or do we need to be aware that, to get out of this, somebody is going to pay the \$15 billion, either the new producers or somebody on a rate base —

**The Chair:** Mr O'Toole, is this a two-part question?

**Mr O'Toole:** Yes.

**The Chair:** Well, you've rolled it now into one question.

**Mr O'Toole:** I'm just finishing the first part.

**The Chair:** You have no time for the second part. Let's go to the first part.

**Mr O'Toole:** Thank you for the permission. I look forward to —

**Mr Farlinger:** Let me try to help with this stranded-debt thing. Let's say that the price of competitive power on average will be 4.5 cents, just to use that for an example. And let's say that right now we are charging 6.5

cents. Let's think about sending the customer a bill, which we now are, for 6.5 cents, and after competition comes in we're going to send them a bill for 4.5 cents plus two cents stranded-debt charge to pay off the stranded debt. In some jurisdictions they've just put that charge on the grid, so any power that flows anywhere, in our case in the province, whether it comes from an American company or anybody, there is a two-cents charge that goes to pay off the stranded debt.

You're still paying the same price for your power, so we are still as competitive as we were. As soon as the stranded debt is paid off, the two cents drops off and now everybody is paying 4.5 cents. We are paying that stranded-debt charge effectively now; that's the important point. Now, is it really going to balance out? That I'm not so sure about. Part of it is going to balance out. A good part of the stranded debt we're paying for today and we will pay for it in a little different form when competition comes in.

**The Chair:** There is time for a popcorn round, one question for each caucus, excluding Mr O'Toole because he likes to move into a narrative. But he does it well. Mr Conway, one question.

**Mr Conway:** Mr Farlinger, the government's white paper contemplates over the next couple of years the breakup of Ontario Hydro into several entities. It would strike some observers that your situation, which is admitted on all sides to be very difficult now, to manage your way through the nuclear recovery plan and to meet the ongoing obligations of a big power utility, but to do that — and in response to a question from Mr Lessard on things like not just your financial obligations but your labour contract issues — is it your view that the breakup of Ontario Hydro in the next few years into several smaller, distinct units helps or complicates Ontario Hydro's ability to get through the difficult night of the next couple of years, particularly when we think about the nuclear asset optimization plan?

**Mr Farlinger:** I guess my vision of the future, which may prove to be wrong, is that sooner or later, when competition is there, the government will get out of most of the businesses that we're now in and privatize this thing. Why would the government continue to compete with the private sector once you bring competition in? Where that takes me is to saying, "How could the government get the most out of its asset when it sells its asset?" I'm told by the investment community that a utility that has a grid as well as generation is more valuable than one that doesn't, that there are synergies there that investors will pay for. Therefore, I think it's too bad in a sense for the people of Ontario to get less money for their asset than they might otherwise get. If my assumption's wrong and the government is not going to dispose of these things, then the principle doesn't stand up.

**Mr Lessard:** Just to follow up on that, your recommendation is, if the government were to decide to privatize Ontario Hydro, that it do so as part of a big package rather than to split it up into separate parts.

**Mr Farlinger:** No, I think the grid and the generation might stay together. I think that would be a more saleable product. I think the retail could go out and be dealt with separately. We have a very big retail business, as you know. I think it could be dealt with quite separately.

**Mr Doug Galt (Northumberland):** Just a point in connection with the white paper as it's rolled out. My understanding is that's to bring in competition; it does not bring in privatization.

A question I'd like to toss to you, Mr Farlinger. You've kind of rolled down an interesting road in the last few months, one that's had a lot of challenges in it. They brought in Mr Andognini to do a review. We could have gone the road that we've gone on Ontario Hydro for many years of Strong and Franklin, where each of them said they improved it. But obviously from the figures we've seen it's continued to deteriorate under the various leaderships. Have you ever had any regrets of bringing this to a head and trying to sort it out?

**Mr Farlinger:** No. Maybe as you get closer to the end of the road it gets easier to do the right thing, Mr Galt. I don't know. I didn't think we had any choice.

**Mr Galt:** So in your eyes it became very obvious what had to be done.

**Mr Farlinger:** Yes.

**The Chair:** No, you had two questions, Mr Galt. I said one question, and I appreciate that very much.

**Mr Galt:** But this is my first opportunity.

**The Chair:** That's right, and we welcome that as well. We appreciate that.

Mr Farlinger, thank you very much for your attending upon the committee. We appreciate your answers and the evidence you gave. I know some members of the committee have asked if you'll table additional information. I'm sure you have made a note of that and you'll do so; you'll give the clerk a copy of your prepared statement, so we have that for Hansard as well. That will facilitate the members being able to read that quickly during the week. I appreciate your presence here.

Dr Andognini, thank you very much for being here with the chairman. We know that if there's any further information we require we can count upon your support and your response in a timely fashion.

**Mr Farlinger:** Indeed. Thank you, Mr Chairman.

**The Chair:** Thank you, Mr Farlinger. You're excused.

Members of the committee, it's almost time for us to go to the House for a vote. May I remind members of the committee that the dinner hour is being held in committee room 1 this evening. So if you'll note that, committee room 1 for your dinner, for members of the committee only. We will reconvene at 7 pm in closed session to begin to deal with the issues surrounding the report.

Any other business before we adjourn to the House? If not, then we stand adjourned until 1900 hours.

*The committee recessed at 1740, to continue later in closed session.*



## CONTENTS

Monday 24 November 1997

Ontario Hydro.....	H-621
Ms Eleanor Clitheroe	
Ms Malen Ng	
Mr Bill Farlinger	
Mr Carl Andognini	

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